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13 March 1981

# USSR Report

MILITARY AFFAIRS

No. 1573

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13 March 1981

# USSR REPORT MILITARY AFFAIRS

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**ERRATUM:** In JPRS 77515 of 5 March 1981, No 1572 of this series, please make the following changes on Table of Contents and in text:

on page a of Table of Contents, reverse AIR and GROUND FORCES headings so AIR FORCES precedes article titled WEST GERMAN JOURNAL DESCRIBES BACKFIRE, and GROUND FORCES precedes article titled MOTORIZED RIFLE TROOPS: TRAINING AND RELATED ACTIVITIES;

on page b of Table of Contents, change heading of first related article to read 'Pokryshkin on DOSAAF Aims, Tasks';

on page 33 of text, in the subslug and article subhead, change the spelling of the author's name to read Air Mar A Pokryshkin, and delete the phrase 'N.I. Makeyev, chief editor.'

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## ARMED FORCES

### INTERPERSONAL CONFLICT DISCUSSED

Moscow ZNAMENOSETS in Russian No 1, Jan 81 signed to press 22 Dec 80 p 26

[Article by ZNAMENOSETS correspondent Maj V. Litovkin: "Conflicts Which Could Have Been Avoided"]

[Text] These letters were received from different garrisons, situated many hundreds of kilometers from one another. Different people wrote them and related dissimilar stories, although in essence they are very close. Both deal with interpersonal relations, the inability to create in the collective an atmosphere of mutual demandingness and good will, and how this sometimes hinders performance of military duty.

...Maj Andrey Andreyevich Soldatov and Warrant Officer Aleksandr Pavlovich Zolotarev are stationed at a distant Arctic military base, situated in a remote area among mountains, lakes, and sparse, stunted forest. Military service is difficult in the North; the climate is harsh, and extremely needed here, alongside high principles, demandingness and an implacable attitude toward shortcomings, are solicitous and respectful interpersonal relations, especially between commanders and subordinates. But when these are lacking, the slightest trifle grows into conflict, and then the absence of friendly warmth, as well as the presence of prejudice and rudeness burn more severely than frostbite.

Warrant Officer Zolotarev experienced something of this kind. He still does not know why Soldatov took such a great dislike toward him, but he felt its burning cold particularly acutely. It began when he was completing 11th grade studies. He was summoned by the school to take final examinations for a diploma. The warrant officer wrote out an application, attached the required documents, and requested the required leave as is appropriate in such cases.

It would seem to be a simple matter — sign the application and submit it to his commanding officer. But Maj A. Soldatov was not cooperative. Zolotarev had to request leave separately for each consultation and for examinations, while Soldatov, as if doing his subordinate a great favor, would allow him to leave the base for a few hours. And he gave no thought to the fact that, while demanding discipline and efficiency of the warrant officer, he himself was failing to observe the requirements of the appropriate documents.

The ambiguity and uncertainty of the position in which Zolotarev found himself during the examinations made the warrant officer angry and resentful. And on a subsequent occasion, when the officer would not permit the warrant officer to go home

from work early to clean out a clogged flue, a decision made without any apparent reason, simply out of capriciousness, the warrant officer could contain himself no longer.

In the Arctic an obstructed stove is a disaster; the apartment would become cold within a few hours, and there was a child at home. On the following day Zolotarev told the major off in no uncertain terms, which brought immediate and severe punishment. In our opinion this was hardly the best way to resolve the conflict and indoctrinate a subordinate.

Time passed, but a prejudiced attitude and disinclination to look closely into his subordinate's concerns, help and support him were becoming rigidly solidified in Maj A. Soldatov's attitude toward Warrant Officer A. Zolotarev. Zolotarev submitted an application requesting permission to enroll at a secondary technical school to study his military occupational specialty. The officer initially consented, made him rewrite the application several times allegedly due to mistakes, and then suddenly reversed his decision: "Denied!" On another occasion Zolotarev was informed that his next leave would be in the summer. But when he was about to take his son south and had already informed his relatives and friends that they would soon be arriving, his commanding officer suddenly cancelled his leave without explanation and did not let him go until 29 December. Upon returning to his unit, he was immediately given his next regular leave.

Another unpleasant conversation ensued, again followed by disciplinary action.

The warrant officer's patience was at an end. He wrote to the editors: "Comrades, please help me. Tell me how I can continue serving here when one person's dislike for another has progressed too far...."

"What do you mean dislike, prejudice?" asked Maj A. Soldatov in surprise when I brought up the matter of A. Zolotarev's letter with him. "In all instances I have been guided solely by regulations and the interests of the service."

At first glance this might indeed seem so. But after thoroughly studying the situation in the subunit, talking with people, and looking into the heart of the matter, it becomes clear that in all these conflict situations the officer was not being entirely objective, to put it mildly. Take the incident of the application to enroll at the technical school. All Andrey Andreyevich had to do was summon the warrant officer to his office and explain to him that such permission could be given only with a positive service record, but Zolotarev's record of service card indicated disciplinary punishments. First he would have to shape up in his work and discipline, and then he would be given permission to enroll in school. The reshuffling of the leave schedule is totally incomprehensible.

While noting Maj A. Soldatov's high degree of proficiency at his job and his dedication to the military, many comrades pointed to the impetuosity of this officer and the ease with which he could injure a person with sharp, rude words. And I inevitably came to the conclusion that the conflict in question could have been avoided if Andrey Andreyevich had been able to suppress his own petty irritability and, quite frankly, his prejudice toward a subordinate, if he had treated him as regulations prescribe, not only with demandingness and implacability toward

deficiencies but also with trust, respect, and concern. But unfortunately the officer lacked party principledness and consistency in his actions, just as he lacked the ability to indoctrinate his subordinate with patience and persistence, rather than limiting himself to catchall reprimands -- "For tactless behavior in dealings with superiors."

Maj A. Soldatov now regrets what happened. I believe, however, that he still has failed fully to understand his mistake and is trying to reduce the entire problem to Zolotarev's quarrelsome disposition, touchiness and quick temper.

It is true that the warrant officer is not an easy person to get along with, but the fact is that one does not choose subordinates or superiors, and an officer's task is first and foremost to teach his men patiently and purposefully. Relying on a person's best traits and on the strength and support of the collective, an officer should strengthen conscious military discipline, promptly reveal and correct the causes of disciplinary violations, rather than fostering their occurrence.

The wife of Warrant Officer V. Yashnikov wrote a letter to the editors, relating the heartless attitude being shown in the unit toward her husband. She was particularly indignant over the fact that when the unit's officers and warrant officers traveled to another garrison for a medical examination and her husband was put into the hospital there for treatment, his commanding officer, Capt I. Mateykovich, who resided, incidentally, in the neighboring building, did not even inform her of this. It was not until the following morning that this woman, making anxious inquiries with the unit executive officer, found out where the father of her children had "disappeared." And during the entire time Warrant Officer V. Yashnikov lay in the hospital, Mateykovich did not inquire about his state of health even once and did not arrange for a visit to the patient. In addition, he sent his subordinate's private vehicle operator documents to the local office of the State Motor Vehicle Inspection, although he had no right to do so.

When I inquired about the reason for such treatment of this warrant officer, Capt I. Mateykovich, as Maj A. Soldatov had done, also began claiming that his subordinate was "quarrelsome and hard to get along with." But is this reason for a prejudicial attitude toward a person?

The letters we have discussed do not appear very frequently in the editor's mail, and correspondents, regardless of distance, hasten to travel to the spot by ground or air to look into the situation and give assistance.... And how disheartening it is when, upon arriving at the destination, one sees that the conflict arose due to a trifle, that it easily could have been resolved right there in the unit. If certain individuals were not only tolerant toward shortcomings but also unswervingly guided by the provisions of military regulations in relations with their subordinates, if they combined "high demandingness and principledness... with trust of, respect and constant solicitude for others...."

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## ARMED FORCES

### TROOP INTEGRATION EFFORTS DESCRIBED

Moscow ZNAMENOSETS in Russian No 1, Jan 81 signed to press 22 Dec 80 pp 21-22

[Article by Col V. Zakharchenko, inspector, Agitprop Department, Main Political Directorate of the Soviet Army and Navy: "As a Unified Family: From Experience of Ideological Work With Warrant Officers"]

[Text] Military personnel of different nationalities serve shoulder to shoulder in the USSR Armed Forces, including warrant officers. Quality of training and indoctrination of young servicemen are in large measure determined by these warrant officers. And it is natural that indoctrination of warrant officers in a spirit of Soviet patriotism and internationalism and instilling in them respect for all nationalities and ethnic groups in our country as well as an esprit de corps is a particular concern of commanders, political workers, party and Komsomol organizations.

Positive experience in ideological work with warrant officers in this area has been amassed in some of the units in the Red-Banner Transcaucasus Military District. For example, the secretary of the party committee of one of these units, together with officers V. Shepelev and L. Kachalin, studied this question in detail and subsequently presented it for discussion by party members. A useful discussion was held, in the course of which it was noted that young representatives of many nationalities serve in the subunits, and that indoctrination of fraternal solidarity is still being conducted in a haphazard and sporadic manner in some subunits. The Communists outlined ways to correct deficiencies. First and foremost they resolved to improve the political instruction of military personnel of this category. Experienced methods specialist Maj V. Burovich was appointed to lead their group.

Becoming more closely acquainted with the students, the officer endeavored to kindle in the mind and heart of each one of them sparks of lively interest in political instruction. He did this both during personal interviews and at training classes.

The students will long remember the class at which Major Burovich read letters written by soldiers at the front to family and friends, published in the army press during those terrible years. The political instruction topic "CPSU Demands on Military Cadres. The Role of Warrant Officers in Training and Indoctrination of Personnel and Improving the Combat Readiness of the Subunit and Unit" was presented with vivid examples. Nobody could remain indifferent upon hearing the text of a letter from fellow guardsmen to the wife of soldier Sh. Ibragimov: "Dear Adli! We are comrades-in-arms of your husband Shokir Ibragimov. We have marched into battle



with the Germans shoulder to shoulder with him. Shokir is a fearless submachine gunner. He is a squad leader. Recently we were engaged in savage battle for a large Ukrainian village, like many of your villages in Turkmenia. The Germans were defending with desperate ferocity, delivering savage fire from guns, mortars and submachineguns. But brave Shokir does not fear death! He killed 13 fascist invaders in this battle. We kept possession of the village. Be proud of your husband, Adil! Tell your fellow countrymen about his brave deeds."

Hearing this letter by the guardsmen was a moving experience for the group of trainees. The discussion, begun by the leader, was continued by Warrant Officer I. Aliyev.

"The words spoken by Mikhail Ivanovich Kalinin that the friendship among the peoples of the Soviet Union amazed everybody abroad -- both our friends and our foes -- are particularly dear to my heart, as an Azerbaijani. This friendship has been tempered, just like steel, in the most severe tests."

Warrant officer Aliyev's statement was backed up by Warrant Officer M. Kimaziyeu, a native of Uzbekistan: "Dozens of my fellow countrymen became Heroes of the Soviet Union during the war years. Thousands upon thousands of the finest sons and daughters of our multinational homeland received this, our country's highest honor. We owe our good fortune to them. Men of more than 10 nationalities are serving in this unit today. In our group there are Azerbaijani, Ukrainians, Russians, and Georgians. The friendship among our peoples is our most precious achievement. Herein lies our strength and invincibility! For we are children of a single motherland. And it is our duty to defend it as sons should do."

In the course of the class the students shared their work experience in training and indoctrinating personnel and in forming in their subordinates excellent moral-fighting qualities and a feeling of friendship and esprit de corps. Warrant Officer A. Amlukhanov wrote a paper, an assignment given him by the group leader, on the topic "The 25th CPSU Congress on Indoctrination of Military Personnel in a Spirit of Friendship Among the Soviet Peoples, Patriotism and Socialist Internationalism." He subsequently used this paper as a basis for a speech in the subunit.

Preparing for the class on this topic, the warrant officers studied and made an outline of V. I. Lenin's "Critical Comments on the Nationalities Question," V. I. Lenin's letter "To Comrade Communists of Azerbaijan, Georgia, Armenia, Dagestan, and the Gorskaya Republic," and others. It is not surprising that the students displayed profound knowledge at the seminar.

Such an approach to the political training of warrant officers, this most important form of indoctrination, is characteristic of the majority of the unit's political workers.

Agitprop groups plan an active role in internationalist indoctrination of personnel, including warrant officers. In the unit in which officer V. Balyukov serves, arrangements were made for the most highly qualified propagandists to address the warrant officers on current political topics. Then the idea was presented to establish a warrant officer lecture agency attached to the garrison officers' club. At the first session officer V. Farfilov spoke on the subject "Friendship and Brotherhood of the Peoples of the USSR -- Source of the Might of This Country and

the USSR Armed Forces." He thoroughly discussed Leninist theses on the nationalities question and demonstrated with concrete examples the significance of solidarity among military personnel of different nationalities in daily military life.

Officer N. Gadzhiyev presented a lecture entitled "Internationalist Character of the Armed Defense of Socialism." Also outstanding was a lecture by officer Ye. Dobrovol'skiy on the topic "Indoctrination of Military Personnel in a Spirit of Soviet Patriotism and Internationalism -- Most Important Task of Commanders of All Echelons." A series of lectures was also presented by officers D. Skvortsov, Kh. Khaletsev, V. Belotserkovskiy and others.

Unit propagandists took as a guide to action the CPSU Central Committee decree entitled "On Further Improvement of Ideological and Political Indoctrination Work" and the conclusion that forming in Soviet citizens a scientific-philosophical outlook, total dedication to the cause of the party, Communist ideals, love of the socialist homeland, and proletarian internationalism has been and remains the heart of ideological and political indoctrination work. They are guided by this thesis in their daily activities.

Various forms of ideological work are employed to accomplish the assigned task. In particular, the following morning activities are popular with the warrant officers: "The Region in Which You Serve," "By a Map of Our Homeland," "I Am a Citizen of the Soviet Union," and "My Homeland Is the USSR." Presentation of these activities takes into account the multinational composition of the audience and the character of the men's service duties.

In one of the district's units, for example, a specific-topic morning activity entitled "Soviet Azerbaijan in 60 Years of Soviet Rule" was prepared and presented for the warrant officers, one out of every three of whom is an Azerbaijani. Personnel from other nationalities were also invited to this activity. The men were addressed by a political worker and representatives of local party organizations. Komsomol activists selected and presented excerpts from feature and documentary films, an exhibit of books, and a wired, illuminated map of new construction projects in the republic, graphically showing the successes of the Azerbaijani people achieved with the assistance of this country's brother peoples during the years of Soviet rule. The event was highly successful.

Cultural and educational establishments greatly assist commanders and political workers in performing the tasks of internationalist indoctrination of military personnel, including warrant officers. Lecture agencies for warrant officers, entitled "Indissoluble Union of Free Republics" [first line of Soviet National Anthem], have been organized under the auspices of the Tbilisi, Baku and other officers' clubs. Lectures are presented by officials from local party organizations, propagandists, and unit commanders. Addresses by R. Goglidze, First Secretary of the Zavodskoy Rayon Party Committee in the city of Tbilisi, and O. Gurgenidze, a lecturer from that same rayon committee, who acquaint the men with the achievements of the rayon and republic in achieving the targets of the five-year plan, are highly successful, for example.

In propagandizing Leninist nationalities policy, strengthening of the friendship among the peoples of the USSR, and solidarity of military collectives, commanders and political agencies skillfully utilize the possibilities of unit combat glory rooms, museums, as well as the museum dedicated to the history of the troops of this district.

Get-togethers between young warrant officers and command officers directly at the museum, where they become acquainted with the history of the unit and its fighting traditions, has become traditional in one of the units. This museum carefully preserves relics of combat glory, and personnel are well acquainted with the names of Heroes of the Soviet Union who have served in the unit, and who include Russians, Ukrainians, Azerbaijani, Georgians, and Armenians. There is a council operating under the auspices of the museum. Council activists include warrant officers M. Akhmedov, I. Razumnyy, and T. Khanbabayev. Together with other military personnel and Komsomol activists, they do a great deal of work in the area of internationalist indoctrination not only of young soldiers but also of those who are preparing to become defenders of the homeland.

In the course of get-togethers and lectures, commanders and political workers use persuasive examples to reveal the sources of friendship among the Soviet peoples and demonstrate how it was tempered in the flame of battle, in joint struggle, and strengthened by the blood of sons who gave their lives for the homeland.

Warrant officers M. Prasolov, I. Razumnyy, and D. Stepanyan, veterans of the Great Patriotic War, have also become active propagandists of the Leninist nationalities policy.

The efforts of commanders, political workers and activists are not in vain. The men of this unit are continuing with concrete deeds the traditions of the older generations. Take, for example, the tank company under the command of Sr Lt I. Yakushkin. It has been named the unit's best company on the basis of the year's performance results. Men of nine nationalities serve in this company. The source of their success is friendship and military comradeship. It is appropriate at this point to recall the words spoken by L. I. Brezhnev on the army: "Our army is also a special army in the sense that it is a school of internationalism, a school of indoctrination of feelings of brotherhood, solidarity and mutual respect on the part of all nationalities and ethnic groups in the Soviet Union."

Such traits as dedication to the cause of communism, profound internationalism and Soviet patriotism are characteristic of Soviet military personnel, who represent all nationalities. Improvement of all work aimed at indoctrination of personnel, including warrant officers, in a spirit of friendship among the peoples of the USSR and socialist internationalism will promote further enhancement of the educational role of the USSR Armed Forces and achievement of additional success in strengthening combat readiness and in competition to honor the 26th CPSU Congress in a worthy fashion.

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## ARMED FORCES

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Moscow TEKHNIKA I VOORUZHENIYE in Russian No 1, Jan 81 signed to press 12 Dec 80  
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## GROUND FORCES

### INCREASE IN CAPABILITIES, COMBAT STRENGTH DESCRIBED

Frankfurt/Main SOLDAT UND TECHNIK in German No 1, Jan 81 pp 13-21

[Article by fm: "The Steadily Rising Combat Strength of the Soviet Ground Forces, 1970-1980"]

[Text] We hereby present this survey as a compilation of data from open sources to give our readers an overall view.

The postwar development of the Soviet Army can be subdivided into three periods: the first one, tying in with the consolidation after the end of World War II, brought the full motorization of this mass army which until then was still extensively dependent on the use of horses. The second period brought full mechanization, that is to say, the equipment of all combat units with armored fighting vehicles. This was paralleled by the acquisition of a tactical atomic warfare capability.

During that period of time, the distribution of forces initially remained by and large unchanged. A considerable change in the approaches to the Soviet Union resulted only at the end of that period of time following the invasion of Czechoslovakia. This operation clarified the ability of the Soviet Army, in conjunction with other forces of the Warsaw Pact, to carry out an attack, planned in advance, without mobilization and coupled with extensive deception. In starting our description of the development of the Soviet ground forces during the following decade we might therefore once again briefly touch on that operation. After that event, which was of great significance for the balance of power in Central Europe, a third period began and it featured the qualitative improvement of the Soviet ground forces.

#### The Czechoslovak Invasion

The invasion of the CSSR [Czechoslovak Socialist Republic] in August 1968 was a large-scale military lightning operation carried out by the fully mechanized ground forces of the Soviet Union and its satellite states. The staff that was directed to do the military planning for this invasion, probably the staff of the NCT [Northern Group of Troops], which only has two Soviet tank divisions and a rather understrength airborne corps in Pomerania and Silesia, probably came up with the following situation estimate during the early summer of 1968:

The combat value of the ten divisions of the CVA (Czechoslovak People's Army) is good in material terms but it is doubtful whether it would display any real

determination to put up any resistance. At any rate it must be expected that it will resist any forcible occupation of its country. Because its situation is tactically unfavorable on account of possible encirclement by the available forces of the Warsaw Pact, a superiority of about 2.5:1 would be enough to carry out the invasion with prospects of rapid success. This is why about 25-30 divisions would be needed. They, to be sure, could be taken from the Soviet and satellite armies already stationed around the CSSR but then the share of satellite armies would be disproportionately high or the GDR (Group of Soviet Forces in Germany) would have to be reduced too much. A certain deployment of Soviet forces in Poland and in the USSR therefore could not be avoided. That calls for large-scale camouflage maneuvers. There is no reason to expect NATO forces to interfere. First of all, no political intention is recognizable because the United States, the leading power of the NATO, will stick to the delimitation of the interest spheres of both blocs as it did in 1953 and 1956 during the uprisings in the GDR and Hungary. Besides, NATO has no military capability whatsoever of coming to the aid of the CVA: following the pullout of the First French Army from NATO subordination and the departure of most of the 24th Mechanized Infantry Division (U.S.) from Bavaria, the south German area has in practice been left to the II German Corps which has been weakened by a personnel shortage and whose three divisions are scattered over Bavaria and Baden-Wuerttemberg.

The invasion therefore can be carried out in a concentric fashion by about five field armies with about five divisions, each. Behind that, two armies will be held in readiness in the second echelon.

As a result of this kind of situation estimate or a similar estimate, forces were moved from the Baltic, from Belorussia, and from the Carpatho-Ukraine to Poland and to the eastern border of Slovakia as part of the so-called "resupply maneuvers." The following were lined up for the invasion:

Strong airborne forces, including at least one airborne division from the Belorussian area, as well as Soviet divisional units and Polish airborne units aimed at a minimum of six drop zones.

A tank army from the GDR with one NVA [National People's Army] division and four divisions from the area of Thuringia, aimed at northwestern Bohemia.

A second tank army from the GDR with another NVA division plus two Soviet divisions from the Saxony-Lausitz area, aimed at northern Bohemia and Prague.

One Polish army with three divisions, aiming at southern Bohemia.

One Soviet Army from the Carpatho-Ukraine, aiming at Slovakia.

Two Soviet Armies, with six Soviet and two Hungarian divisions and probably also with a Bulgarian regimental combat team brought in by air from Hungary, aimed at southern Moravia and Slovakia.

The invasion took place mostly as planned. In spite of the long political and military warning time, the government of the CSSR was taken by surprise. It did not want to take any countermeasures or it was unable to do so. It was not even able to avoid the drop by the airborne units which landed in the middle of the

night at two or three airfields around Prague. The approximately 25 divisions in the invasion force, together with their support and logistics units, probably came to a total of 400,000-500,000 men, according to an announcement by the CSSR defense minister even 650,000 men. Along with the invasion, the Soviet high command probably saw to it that the gap arising in the GDR was closed. That required at least one army with four or five divisions which probably was moved up from Belorussia right after the occupation of the CSSR. It is not clear whether the gap arising in Hungary was also closed. There are some reports mentioning the movement of airborne units. Following this operation, the CSSR has been occupied by strong Soviet forces to this very day. Under a higher headquarters located near Prague they constitute another "group of forces" in the approaches to the Soviet Union. Because of their deployment between the GSTD in the GDR and the SGT (Southern Group of Forces) in Hungary, the new group has been referred to as the ZGT (Central Group of Forces). It consists of five divisions, support and logistics units, as well as one army and its own air units.

While NATO until then was able to oppose a surprise attack conducted by forces stationed along the Iron Curtain, that is to say, primarily by the GSTD, with roughly equally strong ground forces, the balance of power had now shifted. A surprise attack by the three "groups of forces" from the GDR, the CSSR, and from Hungary since then has had much better chances.

#### Fighting Strength Increase

The GSTD and probably the entire Soviet Army in 1973-1980 experienced a considerable increase in their fighting strength. Specifically, the following forces were added to the GSTD:

The tank battalions of the motorized rifle regiments received nine additional tanks; their platoons now consist of four tanks and each company has 13 tanks. The total number of tanks in the tank battalion of the armored rifle regiment has been increased from 31 to 40 (1).

The tank regiments in addition received a motorized rifle company equipped with ten BMP APCs.

The motorized rifle regiments now have an entire organic artillery battalion. In regiments equipped with the BMP APC, the artillery battalion consists of 18 122-mm M 1974 SP armored howitzers while the regiment equipped with the BTR-60 PB APC is equipped with 18 122-mm M 1963 (D-30) field howitzers.

Besides, the AT companies of all motorized rifle regiments have been equipped with AT guided missile systems on BRIM-1 and BRIM-2. Like Western brigades, they therefore have a capability for combat operations by combined arms.

An additional independent tank battalion was assigned to the motorized rifle divisions as a special-purpose unit. It is subdivided into five companies of ten tanks, each (3).

The tank and motorized rifle regiments received a regimental AA battery equipped with four ZSU-23-4 armored AA mounts and four SA-9/GASKIN AA guided missile systems on BRIM-2 [chassis].



The fire power of the multiple rocket launcher battalions in the tank and motorized rifle divisions was considerably boosted by an increase in the number of launchers from 12 to 18 and especially by the introduction of the 40-barrel BM-21 standard launcher. The number of tubes in the division was increased from 192 to 720 (5).

The fire power and mobility of the artillery regiments in the tank and motorized rifle divisions were improved through the modernization of the artillery inventory: the regiments now have two medium artillery battalions with 16 122-mm M 1963 (D-30) field howitzers plus one heavy artillery battalion whose former 16 152-mm M 1965 (D-20) gun-howitzers have already been extensively replaced by the 152-mm M 1973 heavy armored howitzer.

The 34th Artillery Division in Potsdam, which is directly under the "Group," has been reorganized and reequipped. It now has four brigades under it, with the following equipment: one brigade with the 130-mm M 1954 (M-46) field gun, one brigade with the 155-mm M 1955 (D-20) gun-howitzer, one brigade with the 152-mm M 1973 SP armored howitzer, plus one brigade with the BM-21 multiple rocket launcher and possibly already the follow-on model, the M 1977.

The semimobile SA-2/GUIDELINE and SA-3/COA AA guided missile systems, used in the group and army echelons, were turned over to the AA guided missile units of the sixth "national air defense system" of the Warsaw Pact countries. In return, the AA brigades used for field unit AA missions on those echelons were equipped with the SA-4/GANEF mobile AA guided missile system. In the AA regiments of the divisions, the 57-mm AA gun model S-60, was extensively replaced the SA-8/GANEF AA guided missile system, but partly also already by the fully autonomous SA-8/GECKO AA guided missile system, that is to say, a system which is equipped with all required radars on a carrier (6).

The first assault helicopter regiments were organized under the 16th Airborne Corps starting in 1974 in Stendal and Parchim; they have in the meantime probably been followed by others. They are equipped with the MI-8/HIP and MI-24/HIND attack helicopters. The most modern version of the MI-24, the HIND D, is equipped with four firing pods for 32, each, unguided air-to-ground rockets and four firing frames for AT guided missiles. Besides, it is equipped with a quadruple automatic caliber 12.7-mm Gatling gun.

As a result of these measures, designed to enhance the combat strength of the combat units during the seventies, according to calculations by J. Erickson (8), the fighting strength of the 20 Soviet divisions stationed in 1976 in the GDR corresponded to the fighting strength of 25 divisions stationed there in 1966. Looking at the personnel strength and the equipment, the situation of the Soviet Union in its approaches looked as follows.

Tank division: 10,000 men (9,000 in the past), 325 battle tanks, about 150 BMP AFVs [APCs], about 120 BRIM [vehicles] for various uses, such as wheeled ARVs and weapons carriers for AT and AA weapons systems, 90 guns and mortars with a caliber in excess of 100 mm, 18 multiple rocket launchers, and 52 AA guns and AA guided missile systems.

Motorized division: 13,000 men (formerly 11,000), 266 battle tanks, about 330 AFVs (including 95 BMP, the rest BTR-60 PB, about 130 BRIM [chassis] for miscellaneous

uses), about 180 guns and mortars with caliber in excess of 100 mm, 18 multiple rocket launchers and 52 AA guns and AA guided missile systems.

As a result of these reorganizations and additional equipment in use, the number of available battle tanks has gone up considerably. In a report printed in the 25 April 1973 issue of FRANKFURTER ALLGEMEINE ZEITUNG, we find the following passage: "Accordingly, NATO forces in Central Europe no longer--as was assumed a year ago--are faced on the eastern side with about 14,000 tanks; instead, they are now facing about 20,000 tanks. The ratio of forces thus has continued to shift in favor of the Warsaw Pact. Until now, the experts were figuring, on the basis of the data published in the Defense White Book of October 1971, roughly on a ratio of 1:2 for tanks on the NATO and Warsaw Pact sides. But in the meantime, the ratio has deteriorated even further to the detriment of the Alliance; it is now 1:3" (9).

The above-mentioned report furthermore states: "Atlantic Alliance intelligence on military developments in the Warsaw Pact gives us the following picture: the number of tanks which the Soviet Union stationed additionally in Central Europe since 1967 corresponds to the entire NATO tank inventory. During that time, the Western alliance did not increase the number of its tanks; only the qualitative fighting strength was improved. The Soviet units in the GDR alone received about 1,300 new armored vehicles. There, the Soviet Union stationed the new T-62 tank. In the judgment of military experts, this vehicle is more maneuverable, faster, and is equipped with greater fire power than its predecessors. One thing that particularly worries the West here is the fact that, in the East Bloc, the older models are being replaced by new models but that they are not being withdrawn into the interior of the country. According to all sources available to the West, they remain in military depots near the border as so-called equipment reserve so that these weapons continue to be instantly ready for action. Besides, we know in the West that the Soviet Union continues to retain in its military personnel force the tank crews which in the past were given training near the border for the purpose of manning those vehicles. The parked vehicles therefore can also be manned again in a short time. At the same time, they are trying out the practice of exchanging the recruits for the Soviet divisions stationed along the Western borders. Of course, in doing that, they are not using the strategic transport capacity of the Soviet Union. Instead, about 200 civilian transport aircraft from the Soviet Aeroflot airline company are available for that purpose."

Regarding the air mobility of the Soviet Army--that is to say, considering the ever more obvious use of helicopters as transport and fighting equipment--we can observe a development which overall is designed to increase the punch of that army. One of the basic principles here is not to use any special units for tactical airborne drops but rather to employ regular motorized rifle battalions. Here, the Soviet helicopter units stationed in the GDR are credited with a capability of simultaneously carrying out about ten airborne landings in battalion strength (10).

#### Modernization of Mechanized Infantry

Starting at the end of the sixties, the BMP, the first real APC of the Soviet Army, was issued in large numbers to the units in the approaches leading to the USSR as well as the units in the country's western military districts. This was followed by the issue of this modern fighting vehicle to the units in the other military districts.



This introduction signified the reorganization of the motorized rifle regiments of the tank divisions as well as one motorized rifle regiment, in each case, in the motorized rifle divisions into motorized rifle regiments equipped with the BMP (APV). The BMP motorized rifle battalion consists of three BMP motorized rifle companies and one mortar battery. It is equipped with 31 BMP APVs (one for the battalion CO and 10 for each company) plus six truck-drawn 120-mm mortars.

The BMP-equipped motorized rifle regiment is equipped with a total of 95 BMP APVs. Its personnel strength is 2,300 (including more than 170 officers) and thus is only a little bit less than the motorized rifle regiment equipped with the BTR-60 PB (2,400 men). On the other hand, its fighting strength is considerably greater than that of the BTR-equipped motorized rifle regiment because its BMP APV is equipped with a 73-mm onboard-cannon, a coaxial 7.62-mm MG, and the AT-3/SAGGER AT guided missile system. Besides, its mobility in the field has been improved considerably since the motorized rifleman have been issued this tracked APV and since its artillery battalion was equipped with 122-mm M 1974 medium SP armored howitzers.

According to statements in the Soviet technical press, obviously no thought was given to converting the other two motorized rifle regiments of the motorized rifle division to the use of BMP. The BTR-60 PB continues to be considered as a full-fledged fighting vehicle for the armored rifle units and there is evidence to the effect that an improved wheeled APV is at least already in the unit trial stage as a follow-on vehicle (11).

The poor fighting strength of the BTR-equipped motorized rifle regiments is partly balanced out by the fact that the battalions of those regiments have their own AT platoon which is equipped with portable AT-3/SAGGER AT guided missile systems or which in recent times has been issued AT-5/SPICOT type. Besides, the motorized rifle companies of the BTR regiments each have two automatic launchers for AGS-17 rifle grenades (12).

#### Modernization of Armored Forces

Another generation change took place among battle tanks during the decade of 1970-1980. The T-54/55 generation, which at the end of the forties and the early fifties was issued to the units, lasted more than 20 years; the T-62 generation, which was issued to some of the armored units during the early sixties, was in service more than 10 years. By the start of the seventies, an estimated 65,000-70,000 tanks had been produced in both of these models (13), broken down as follows:

About 45,000 for the armored formations of the Soviet Army (14),

About 11,000 for the armored formations of the non-Soviet Warsaw Pact countries and

About 10,000 for the countries of the Third World, including big customers such as Egypt, Iraq, Libya, Syria, and India.

Most of them were produced by Soviet army factories whose annual capacity, according to estimates by Western experts, is between 2,800 and 3,200 tanks. Another approximately 1,000 tanks were produced annually by tank factories in Poland and the CSSR on a license basis.

These statistics show us that it takes more than 15 years to renew the inventory of the Warsaw Pact armies and in addition to meet the modernization requests of customers who can pay hard cash. At the same time they make it clear that the tanks of a follow-on generation are already obsolete before they have replaced all of their predecessors. Thus, the production of the T-62, equipped with a 115-mm smooth-bore cannon, was stopped already after about 25,000 such tanks had been produced and when the Soviet Army on the average was still equipped with about 60 percent while the non-Soviet Warsaw Pact countries were still equipped with 100 percent of the T-54/55 armed with a rifled 100-mm cannon.

The T-62 replaced the T-54/55 mostly among the "groups of forces" in the approaches to the Soviet Union and among the units in its western military districts. In those areas, its share, after the completion of the new issue, exceeded the share of T-54/55; for example, among the GSD it was 60 percent, in the ZGT and SGT it was almost 100 percent.

There may not have been only reasons of time for the introduction of a new tank generation. This was possibly also speeded up by the fact that the T-62, which the Arabs used during the Yom-Kippur war in 1973, proved to be of little worth. The article previously mentioned in the 25 April 1973 issue of FRANKFURTER ALLGEMEINE ZEITUNG still praised that tank but, in actual operations, it revealed a series of shortcomings which now became known to the Western public: weaknesses in controls and engine, inadequate track suspension, unsatisfactory fire control system, poorly stabilized cannon, and severe incendiary vulnerability. Besides, its fighting compartment was extremely tight and, when the tank was hit, the crew had hardly enough of a chance of getting out before it was too late.

Prototypes or trial models of the new tank generation were spotted inside the Soviet Union already in 1970 and initially were given the designation M-1970 battle tank. Series production probably started in 1974 and, early in 1976, the first major contingent of new battle tanks was supplied to the Soviet units in the GDR as part of a large-scale overland and sea transport mission. Here, without any recognizable system, they replaced not only the T-54/55 but also T-62 tanks from the armored units which were partly returned and partly stored in depots. The new model at first by mistake was designated as the T-72 (15). Only in October-November 1977 did it turn out that this had been the T-64 which in some details--especially the suspension and the power plant arrangement--differed from the real T-72 tanks which were deployed inside the Soviet Union (16). Because both models regarding their combat value, especially in terms of fire power, armor, and engine performance, can be considered equivalent, it has so far not been cleared up in the West why two different models were issued within such a relatively short span of time. The T-64 might possibly be the technically more expensive model in whose case however it turned out--after the first major series launched perhaps rather hastily due to the impression created by the troubles with the T-62--that it was unsuitable as standard model because of the extensively high effort required during production and/or maintenance. The production of the T-64 was probably discontinued after the inventory of the GSTD had been rounded out.

Regardless of the minor detailed differences, the new T-64/72 tank generation is considerably superior to the fighting power of its predecessors and is characterized by the following:

The high fire power of its 125-mm smooth-bore cannon, which is provided with a light-metal heat-shield casing;

The fact that the crew has been reduced to just three men with the help of an automatic loading mechanism;

The bogie-wheel suspension corresponding to Western standards;

The power plant capacity which was probably increased to 515 kw (700 hp);

The use of a base-line range finder; and

The possibility for the attachment of skirt armor plates on both sides of the hull (17).

The conversion of the Soviet Army's tank units progressed rapidly during the following years.

By the middle of 1970, according to information supplied by Swedish observers, about 2,000 T-64 tanks were already issued to the GSTD. Out of the total inventory of that group, which at that time was assumed to consist of 7,000 tanks, more than 30 percent were T-64 tanks and only just about 30 percent were T-54/55 tanks. The partly already relieved T-62 tanks with about 40 percent still constituted the bulk of the tank inventory (18).

One year later, in the middle of 1979, according to data in INTERNATIONALE WEHRREVUE the number of T-64/72 tanks with the GSTD reportedly already grown to more than 4,000 and the total number of tanks available to the Soviet Army had gone up to 9,900 (19). According to a statement issued by Dr von Buelow, the parliamentary state secretary in the Defense Ministry, on 19 June 1980, to the West German lower house, the West German government expects that, if the current conversion rate is maintained until the end of 1981, about 6,000 of these modern T-64/72 tanks may have been issued to the GSTD armored formations.

In spite of this fast conversion tempo, the Soviet Army since the start of the introduction of the new tank generation has been facing the difficulty of having to consider--in terms of logistics, training, and operations planning--the requirements springing from what now turns out to be three different tank generations. The difficulties, which were accepted for the sake of the uniform utilization of the arms industry, start with ammunition resupply for three tank guns of differing caliber (100, 115, and 125 mm) and extend via the issue of supply and the shipment of spare parts all the way to the training of tank crews and maintenance and repair personnel.

Following the completion of the conversion of Soviet units in the area of the Warsaw Pact, these difficulties will continue to exist for a long time: the tank formations of the non-Soviet Warsaw Pact armies, which until now have been equipped only with the T-54/55, received their first T-72 contingents only at the end of 1979 and the start of 1980 (20). Before that, Moscow had still been forced to assure itself of its markets and thus its influence among its customers in the Third World; at the end of 1978 and the beginning of 1979, India, Libya, Syria, Algeria, and Iraq had already gotten the first shipments of this new tank (21).



For the conversion of the non-Soviet Warsaw Pact armies and to meet the delivery obligations already undertaken in the Third World alone, it will take another three-four years of annual output. But this means that we have already reached the moment which the first series of a follow-on model must be coming off the assembly line. To do that, capacities will become available in the Soviet Union the moment Poland's and Czechoslovakia's tank factories have started the production of the T-72 which is under preparation there.

#### Modernization of Combat Support Units

During the period of 1970-1980 we also have an enormous increase in the battlefield AA potential. The newly introduced systems offer armor protection for the crews and are mostly mounted on tracked vehicles. This means that they can accompany mechanized formations. The AA defenses of a Soviet "general [field] army"--which, for example, consists of three motorized rifle divisions and one tank division--at the end of the decade comprised the following (22):

16 regimental AA batteries, each with four ZSU-23-4 armored AA mounts and four, each, SA-9/GASKIN AA guided missile systems on BRDM-2 mounts, that is to say, a total of about 64 ZSU-23-4 and 64 SA-9/GASKINs.

Four divisional AA regiments, each organized in five AA guided missile batteries with four, each, SA-6/GAINFUL AA guided missile systems (or four, each SA-8/GECKO AA guided missile systems), in other words, a total of 80 SA-6/GAINFUL (or SA-8/GECKO) (23);

One army AA brigade, organized in three battalions, each with 3 AA guided missile firing batteries with three, each SA-4/GANEF AA guided missile systems, that is to say, a total of 27 SA-4/GANEF, and, additionally, four AA batteries each with six 23-mm twin ZU-23-2 AA guns, that is to say, a total of 24 ZU-23-2 for the protection of AA guided missile positions against low-flying aircraft.

On all echelons, the radar equipment required for the employment of AA weapons has been issued in addition or--following the development trend--has been integrated into the AA weapons systems. By means of an integrated data transmission system it is possible to make sure that the reconnaissance findings of the longer-range equipment used by the [field] army AA brigade can be passed on to the AA units of the divisions and regiments.

These "field unit AA" weapons (AA defense forces), as part of the AA defenses of all units, in the major unit we are talking about here, are also joined by about 450 SA-7/GRAIL shoulder-fired AA rockets and--if the T-64/72 tank is to be completely converted--also about 1,200 12.7-mm AA MGs, mounted on tanks.

The modernization of Soviet artillery during the decade considered here is characterized by the introduction of the previously mentioned medium and heavy SP armored howitzers. During World War II the Soviet Union already developed and used various armored artillery pieces on a large scale (for example, the SU-122, JSU-152); in its terminology, they were referred to as "SP artillery mounts" whereas the World War II German Armed Forces called them "assault guns." These armored artillery pieces however disappeared completely from the inventory of the Soviet artillery during the fifties. The artillery units were entirely equipped

with modern field guns which were drawn by trucks or by unarmored tracked prime movers. Only starting in 1970 did the 122-mm howitzer batteries of the motorized rifle regiments get an armored tracked prime mover--in the form of the MT-LB armored transport vehicle--to make their "infantry guns" more mobile. The Soviet Army for a long time accepted the vulnerability of its artillery because this appeared to be more cost-effective to it, in view of the structure of its formation and its operational concepts, than the procurement of armored artillery. The personnel assigned to the Soviet combat and combat support units is so parsimoniously apportioned that their regeneration capacity in combat is very poor. If one man becomes a casualty, this can lead to the breakdown of an entire weapons system because the units do not have any "personnel cushion" and because there is no field replacement system. The operational concept used instead calls for combat units, which have been bled white after a few days of combat, to be replaced completely by new units: a new "echelon" takes over the combat mission. Thus it seems to make no sense to maintain survivable artillery behind combat units that would dwindle away rapidly.

But since the middle of the seventies there seemed to be an incipient change in this concept which is so contemptuous of human life. The reintroduction of armored artillery, which for a long time was considered dispensable, means that the Soviet Union has embarked upon a road which corresponds to the views valid in the West. Simultaneously with the new armored howitzers, an armored artillery reconnaissance vehicle, derived from the BMP APC, and the M-1974 armored artillery command vehicle was introduced into the artillery unit. As a result of this new equipment issue, the mobility and survivability of the Soviet regimental (= brigade) artillery and of elements of divisional artillery, for the general fire fight and for the direct support of combat units, have been increased to such an extent that the concept predominating since World War II can be altered considerably.

The Engineers also during this period of time received a series of new equipment items. They include the MTU-20 bridge-laying tank, which replaced the obsolete MTU-54, and the IMR Engineer tank which is equipped with a crane and a bulldozer blade.

#### Order of Battle

The combat strength increase, brought about among the Soviet ground forces during 1970-1980, through the introduction of new weapons systems, reorganization, and replenishment of inventories, took place imperceptibly and without any change in the order of battle of the major formations in the approaches leading to the Soviet Union. The GSTD, stationed in the GDR, formally until the end of 1979 and the beginning of 1980 still consisted of five armies with a total of 10 tank and 10 motorized rifle divisions which had been stationed there already since the end of the fifties, after a weak army with about 35,000 men had been withdrawn from the GDR during 1956 as part of a general reduction of forces initiated by Khrushchev.

In formal terms, the Soviet Union then at the end of 1979 and early 1980 also implemented the withdrawal of 20,000 Soviet soldiers and 1,000 tanks from the GDR at least in an approximate fashion, as announced with a big propaganda fanfare by Chief of State and Party Boss Brezhnev: according to data obtained by the West German government, about 16,000 soldiers and 700-800 tanks actually left the GDR, including the 6th Guards Tank Division which was pulled out of the Wittenberg areas as a compact major unit.

But the 1956 troops withdrawal from the GDR—including the pullout from Austria in 1955—was afterward more than balanced out by the strategically more favorable stationing of five division in the CSSR.

But the situation was different in the second official troop withdrawal from the GDR: by increasing the number of tanks in the 39 tank battalions of the motorized rifle regiments in the GSTD (9x39 = 351 tanks) and by assigning independent tank battalions to the ten motorized rifle divisions of the GSTD (10x50 = 500), the subsequent reduction had already been balanced out in advance!

While the order of battle of the Soviet divisions remained formally unaltered also in the other countries (Central and Eastern European countries), the total number of Soviet fighting divisions during the 1970-1980 decade went up by about 10 per cent. The highly-regarded London International Institute for Strategic Studies (IISS) in 1970 still assumed a total of 157 divisions, specifically, about 100 motorized rifle divisions, about 50 tank divisions, and 7 airborne divisions. In 1979, the Institute already listed 173 divisions, broken down as follows: 118 motorized divisions, 47 tank divisions, and 8 airborne divisions. The total increase of about 16 divisions was detected in the area of the Soviet-Chinese border, that is to say, in the military districts of Central Asia, Siberia, Transbaikal, Far East, and the Mongolian People's Republic. According to the IISS, we have the following order of battle for the combat divisions of the Soviet Army in 1979-1980:

USSR approaches (GDR, CSSR, Poland, Hungary):	15 PD + 15 MSD	= 30 Div
European part of USSR (Baltic, Belorussian, Carpathian, Leningrad, Moscow, Kiev, Odessa military districts):	23 PD + 38 MSD 5 LLD	= 66 Div
USSR central region (Volga and Urals military districts):	1 PC + 5 MSD	= 6 Div
USSR southern area (Northern Caucasus, Transcaucasus, and Turkestan military districts):	1 PD + 21 MSD + 2 LLD	= 24 Div
Chinese-Soviet border region (see above for military districts):	6 PD + 39 MSD + 1 LLD	= 46 Div
Total	46 PD + 118 MSD + 8 LLD	= 172 Div

Key: PD--Tank division; MSD--Motorized rifle division; LLD--Airborne division.

Remarks: (1) The 173rd division, which is missing in the total, involves the 6th Guards Tank Division whose new station is currently unknown; (2) The divisions currently employed in Afghanistan are counted under their home stations.

All of these 173 divisions do not have the same degree of action readiness in peacetime. About more than half of them must be brought up to full strength through the recall of reservists and the issue of transport vehicles from government enterprises. The personnel replacement requirement here varies between 25 and 75 percent.

The course of the Soviet invasion of Afghanistan--which was partly carried out with such divisions--however showed that the time requirement for the establishment of full action readiness on the part of those major units is shorter than had been assumed so far and that the previously decisive criteria require revision. The decisive thing regarding the situation in Central Europe is represented by the fact that the 30 Soviet divisions, stationed in the approaches to the Soviet Union, are fully combat-ready. According to the 1979 West German government's White Book, another 33 combat divisions with about 8,500 tanks can be moved forward to the west within a few days from the USSR's three western military districts to reinforce those units. According to the IISS, all six divisions of the GDR's "National People's Army," six out of the ten divisions of the CVA, eight of the 15 divisions of the Polish People's Army, and four out of six divisions of the Hungarian People's Army are also fully combat-ready (24).

Moreover, there are five fully combat-ready airborne divisions standing by in the European part of the Soviet Union for operations in the European theater of war. Their combat strength has also been boosted considerably during the past decade: starting in 1973, their parachute units were issued the BMD airborne APC which is an amphibious combat vehicle that has great fire power and that can be dropped by parachute.

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11. SOLDAT UND TECHNIK, No 7, 80, p 400.
12. SOLDAT UND TECHNIK, No 10, 79, p 537.
13. This figure can be derived from the inventory of Warsaw Pact countries and miscellaneous countries supplied by the USSR, as determined by the IISS.



For the area of the Warsaw Pact countries, see also the handbook "Die Armeen der WP-Staaten" edited by Dr F. Wiener.

14. In addition we have another 15,000 tanks in reserve. That inventory consists of some of the older types as well as T-54/55, replaced by T-62.
15. SOLDAT UND TECHNIK, No 2, 77, p 69
16. SOLDAT UND TECHNIK, No 12, 77, p 641 and No 3, 78, p 144.
17. The newer, modified T-72 tanks in the meantime have equipped additionally with continuous skirts. See SOLDAT UND TECHNIK, No 11, 80, p 662.
18. SOLDAT UND TECHNIK, No 11, 79 p 582.
19. INTERNATIONALE WEHRREVUE, No 1, 80, p 22.
20. SOLDAT UND TECHNIK, No 7, 79, p 597; 1, 80, p 46, and 9, 80, p 500.
21. SOLDAT UND TECHNIK, No 11, 78, p 582, and 1, 80, p 41.
22. See item No 4.
23. Some of the Soviet divisional AA regiments have not yet been converted to AA guided missile weapons systems and, in their place, still have 30 radar-controlled 57-mm S-60 AA guns in their inventory.
24. "The Military Balance," 1979-1980, p 108.

#### PHOTO CAPTIONS

Figure 1. T-72 battle tank during winter maneuvers. This modern, very low-silhouette tank only has a three-man crew. Its turret is relatively small. It has modern fire-control instruments.

Figure 2. T-72 battle tank, the Soviet Army's most modern tank, with the 125-mm smooth-bore cannon.

Figure 3. The T-64 battle tank from a bird's eye view. Both hatches in the turret are open. The commander sits under the right-hand hatch. In front of both hatches we can clearly see the optical range finder. Behind the turret is the white accessory pipe for the engine exhaust gases. It is stuck in the dark snorkel pipe which is used to supply air into the turret. We note the very narrow bogie wheels.

Figure 4. T-55 battle tank of a motorized rifle division during invasion of Afghanistan in December 1979. This battle tank, belonging to an approximately 20-year-old generation, is being transported here on a flat-bed trailer.

Figure 5. BMP APC in Afghanistan. This rather low-silhouette, amphibious APC has a 73-mm cannon which can fire a hollow-charge post-acceleration booster round. Above the gun barrel, we have the firing rail for the SAGGER AT guided missile

(not mounted here). In the side wall of the firing ports we see the foremost one which is opened and which is used for the MG and behind it (closed in this case), three ports for hand-fired weapons.

Figure 6. The MT-LB tank-transport vehicle is used as prime mover for the 100-mm T-12 M AT gun and the 122-mm field howitzer. This multipurpose vehicle can be used for the transportation of infantry and for many other purposes.

Figure 7. The M 1974 armored fire control vehicle (ACRV) is an example of the mechanization of Soviet artillery. This armored vehicle, mounted on the standard chassis of the light tank family, offers sufficient room for the fire control center of a battery or a battalion. A very much similar vehicle with highly developed optical instruments on the turret is used as armored observation vehicles for the SP armored howitzer batteries.

Figure 8. AT-5/SPANDREL AT guided missile [system] mounted on BRDM-2. The five firing tubes are so arranged on the chassis of this ARV that they can be reloaded from the rear. The weapons system roughly corresponds to the MILAN. It is used in the AT companies of the BRT-equipped motorized rifle regiments.

Figure 9. 2SU-23-4 armored AA mount. The AA batteries of the motorized rifle and tank regiments are equipped with this radar-controlled quadruple-mount armored AA vehicle. Its high rate of fire makes it an effective AA weapon on the battlefield.

Figure 10. The 122-mm M 1974 SP armored howitzer. This medium armored howitzer on standard chassis taken from the light tank family is amphibious. It replaces the drawn guns in the BMP-equipped motorized rifle regiments.

Figure 11. The 152-mm M 1973 SP armored howitzer. This howitzer is mounted on the same tank chassis as the SA-4/GANEF AA guided missile system and roughly corresponds to the M-109 type which has been used for a longer period of time in the West. The big revolving turret has the commander's cupola, with AA MG on the left.

Figure 12. SA-6/GAINFUL AA guided missile being fired. This weapons system likewise is built on the chassis of the light tank family. The three guided missiles are arranged in a rotating and swingable firing frame. The battery furthermore includes the STRAIGHT FLUSH radar system mounted on tank chassis. The West presently does not have a counterpart for this battlefield AA weapon.

Figure 13. SA-4/GANEF AA guided missile system on tank chassis. The weapons system has the same chassis as the 152-mm armored howitzer. The long-range guided missiles are provided with four, each, booster rockets. The firing frame can be rotated and swung around. The guided missile's great range enables the weapons system to engage airborne targets at medium and high altitudes.

Figure 14. The SA-9/GECKO AA guided missile system. In contrast to most other AA guided missile systems, this one is mounted on an unarmored, amphibious 6x6 chassis which is designed like a pontoon. In the forward portion there is a superstructure with various radar units. In the middle we have the rotatable and swingable firing mechanism for 2x2 guided missiles. The modern, fast-flying short-range guided missile is used in engaging low-flying airborne targets.

Figure 15. The T-55 T M 1972 tank recovery vehicle. The blade is simultaneously used to brace the powerful crane which is mounted left, forward. The tank recovery vehicle in particular can help tank formations through difficult terrain or can support tanks during underwater runs.

Figure 16. The DMR Armored Engineer Vehicle of Armored Engineer companies is an example of the high degree of mechanization of Soviet combat support units. Its blade can be used for snow or rubble removal. The powerful, multipurpose crane is mounted on a revolving turret. The crew can operate the vehicle completely under armored protection.

Figure 17. Mi-8 transport helicopters over a T-54 tank unit. The front-line air units of the Soviet Army have various types of transport helicopters for tactical airborne landings on the battlefield and for logistic purposes.

Figure 18. HIND D attack helicopter over a T-62 unit. The modern KHS [attack helicopter] in addition to other heavy armament, is equipped with four AT--/SWATTER AT guided missiles. The SWATTER has a range of 3,700 m. A modern variation of the HIND, the HIND E, is equipped with four AT-6/SPIRAL AT guided missiles which have a range of up to 5,000 m. The Soviet attack helicopter potential has grown rapidly in recent years. Currently, about 1,000 attack helicopters are in the approaches leading to the USSR, opposite the central European sector.

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## GROUND FORCES

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Moscow VOYENNYI VESTNIK in Russian No 1, Jan 81 signed to press 29 Dec 80 p 1

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## GROUND FORCES

### SMALL UNIT MOUNTAIN TRAINING

#### Importance of Mountain Training

Moscow ZNAMENOSETS in Russian No 10, Oct 80 signed to press 22 Sep 80 pp 2-3

[Article by Col Gen O. Kulishev, commander of Red Banner Transcaucasus Military District: "Small Unit Mountain Training--to the Foreground"]

[Text] The life of a district commander also has moments when he is uneasy and suffers for actions on the battlefield which are of squads, tank crews, or gun sections rather than of regiments and divisions. I also endured such moments when I observed the live firings of the tank crew commanded by Sergeant I. Lozinskiy. At that time, we all passed the test for combat maturity and military skill. And he was received by the Deputy Minister of Defense of the Soviet Union, Marshal of the Soviet Union K. S. Moskalenko.

In accordance with the conditions which were created on this lesson, Sergeant Lozinskiy sat behind the sight of the tank gun and his command position was occupied by the first-class gunner, Private P. Dachishin. Driver-mechanic Private A. Valov was at the control levers of the combat vehicle. And suddenly, whirling up columns of dust the tank tore forward. At these moments, I thought with alarm: will the tankers cope with the moral-psychological tension which is natural under such conditions, do they have sufficient skill? For it is a difficult matter to fire accurately in the mountains.

A comparison which had been read in some book unexpectedly came to mind: "...in order to learn the quality of steel it is not necessary to test all of it; it is sufficient to take an insignificantly small amount as the steel founders do."

"Now," it appears to me, "these three youths in the tank are also that sample from which we determine the quality of the tank crews' gunnery training."

Meanwhile, the first target appeared among the rocks. A cannon round thundered. It could be clearly seen in the binoculars that the target had been hit with sniper's accuracy. The remaining targets also suffered the same fate.

Marshal of the Soviet Union K. S. Moskalenko turned to me and uttered approvingly:

"Well done, tankers! In contemporary battle such eagles will conquer any enemy!"



A few minutes later, we talked with Sergeant Lozinskiy and his subordinates. The marshal awarded the sergeant a wristwatch. Embarrassed by such an award from the hands of the famous army leader, Lozinskiy uttered:

"I serve the Soviet Union!" And then he added: "We collectively decided to dedicate our tiny victory to the 26th Congress of our own Leninist party."

The marshal, who was moved, firmly grasped the hand of the young commander. I was also pleased by the sergeant's success.

I presented this episode to show the pride for the great motherland and for the party of communists which is moving toward its 26th Congress and the enthusiasm and inspiration with which the Transcaucasus servicemen are studying the science to win. Joining in the competition for a worthy greeting for the CPSU's highest forum, they are persistently mastering the tactics of conducting battle in the mountains and are learning to destroy targets with the first round, first burst, and at maximum range, to employ combat equipment skillfully, and raise ideological and physical tempering. The personnel of the district's units and large units are greeting the 63d anniversary of the Great October with an increase in the number of experts and excellent subunits, the ranks of masters of firing and driving of combat vehicles, and rated sportsmen.

All this is the result of the intense labor of commanders, political organs, staffs, and party and Komsomol organizations which concentrated their main efforts on instilling in the personnel revolutionary vigilance and the maintenance of constant combat readiness to repel any aggressor. Our soldiers, sergeants, warrant officers [praporshchik], and officers support with all their hearts the struggle of the Communist Party and the Soviet government for the relaxation of international tension and for peace on Earth. At the same time, they have a profound realization that the imperialists of the United States and the NATO countries are feverishly preparing for war against the USSR and the fraternal socialist states. And under these conditions the Lenin precept, "Be on the alert!" should become a law of the life and service of each serviceman and of all military collectives.

In the last training year we, just as formerly, devoted primary attention to the mountain training of the troops. And this is natural. Ours is a mountain district. The experience of the Great Patriotic War teaches that under conditions of mountain terrain decisive, bold, and initiative actions of even small subunits can lead to significance success in battle. Hence, the attention and concern which we manifest toward mountain training of small subunits.

It is well known that combat operations in mountains are often conducted on separate directions with large gaps and open flanks. Squads, tank crews, gun sections, and platoons may also accomplish independent missions. Therefore, we teach the commanders of small subunits--warrant officers and sergeants--independence in making decisions, the ability to organize battle thoroughly on specific terrain, the conduct of continuous and active reconnaissance, and the manifestation of initiative, military cunning, sharpness, and a will for victory. And this has a positive influence on making commanders of warrant officers and sergeants.

One day, for example, Senior Sergeant V. Gorovoy had to head a motorized rifle platoon in a training battle. The junior commander received a difficult mission:

to infiltrate through the "enemy's" combat formations and seize the dominant high ground in his rear by a surprise attack.

In working out his decision, Senior Sergeant Gorovoy considered many circumstances which could ensure success or hinder the platoon's actions. As a result, a bold concept was born: to climb a sheer slope to the "enemy's" rear, approach the hill unnoticed, and capture it with a surprise attack.

The junior commander implemented his decision firmly and attained victory. The bold and decisive actions of Senior Sergeant Gorovoy in the training battle were instructive and all junior commanders learned of them.

Unfortunately, not all our warrant officers and sergeants organize battle and command their subordinates so skillfully. On the final lessons, for example, the squad of Sergeant A. Mamedov attacked an "enemy" strong point. They launched the attack rapidly. But the shorter the distance to the first trench of the "enemy's" defense became, the more clearly was the fatigue in the actions of the soldiers felt and the rate of attack was slowed. And soon they did not traverse a step. It turned out that the squad leader did not consider one detail: The commander had indicated the line of departure for the attack at a considerable distance from the "enemy" strong point. In this situation, it was necessary to find the correct methods for approaching the "enemy" and then to launch the attack, supporting it with the effective fire of his own weapons. Sergeant Mamedov also committed an error in crossing a minefield at the head of the squad. As a result--a "three" for tactical training.

In order to reduce the number of such instances among the troops we, being guided by the requirements of the Minister of Defense and the commander of the Ground Forces, are improving the methodological and officer training of the warrant officers and sergeants and we are achieving the high quality of each lesson with them. Specialized tactical exercises, battle-drill and tactical exercises, training and live firings, and drills are conducted by commanders after thorough preparations which are preceded by demonstration and training-methods lessons and briefings. Here, special reliance is placed on the practical actions of junior commanders on the ground with the accomplishment of various missions and on molding in them lofty moral-combat qualities and the ability to control squads, crews, sections, and platoons in contemporary battle.

Under the direction of officers, our warrant officers and sergeants are studying and making practical use of frontline experience. And it indicates that the tactics of enemy combat operations in the mountains have a number of special features. Special attention is turned to the activity of small subunits and small groups (detachments). They can block narrow points on roads and bridges, establish ambushes, obstructions, and demolitions, cover mountain passes, and attack moving columns. Here, the enemy lets reconnaissance, tanks, infantry combat vehicles, and armored personnel carriers pass and launches a fire attack with single cannon, tanks, grenade launchers, and small arms against vehicles with personnel. Fire is conducted from commanding heights using snipers who destroy the drivers first.

In the defense of populated places, enemy subunits may be disposed behind clay embankments (obstructions), in towers and houses, firing from embrasures, windows, and doors. In order to defeat an experienced enemy who knows the mountains well and is technically equipped, commanders of small subunits should be able to attack

resolutely, audaciously, and swiftly, defend actively, operate boldly from ambushes, and counterattack suddenly and energetically. The development of these qualities in the warrant officers and sergeants is furthered to a considerable degree by training-methods assemblies which are conducted prior to each period of instruction and on which they master the art of conducting contemporary battle in mountains and the training and indoctrination of subordinates, and they study leading experience. These problems are solved creatively and with initiative in the units where Senior Lieutenants Artyukh and Garbuzov serve.

In the process of planned combat and political training the warrant officers and sergeants conduct a variety of lessons with the platoon and squad personnel, crews, and sections. On the eve of the lessons, briefings are organized with the junior commanders. The immediate chiefs as well as company and battalion commanders help the warrant officers and sergeants to prepare for the lessons comprehensively and to think out the procedure for instruction and organizing competition and the use of the training material base, and they approve the plan for the conduct of the forthcoming lessons. This contributes to raising the quality of tactical, firing, and technical training of the personnel of small subunits, that is, of that which comprises the basis of their field and mountain training.

We observe a different picture in those subunits where the officer and methodological training of the warrant officers and sergeants does not receive proper attention. Let us take, for example, the company commanded by Senior Lieutenant Telefilov. For the reasons indicated above, many of the company's soldiers do not master to a sufficient degree mountain-climbing skills and qualities, which is especially noticeable when crossing hills, deep ravines, and during live firings in the mountains. Moving into the attack upward or downward, many soldiers of the squads and platoons orient poorly on the ground, look more beneath their feet than at the target, lose the indicated direction, and find it difficult in selecting the place for firing, especially on rocky ground. But the junior commanders, seeing this, do not correct their subordinates because they do not master the procedure for instruction in full measure and, really, evidently the sense of responsibility of some of them is insufficiently developed.

Of course, such shortcomings distress us and we are applying efforts to see that there are as few of them as possible.

The high level of mountain training of small subunits is the guarantee of success in contemporary battle. This is why we are tirelessly improving it and we are mastering and employing creatively the experience of the Great Patriotic War and other combat operations in the mountains. The mountain training of small subunits is conducted continuously in the district, in the course of the entire training process and not only at special assemblies.

The principles of mountain climbing and theoretical questions are worked out in the position areas of subunits and units, and mountain equipment and the procedure for its use are studied. When going out on exercises and in mountain training centers main attention is devoted to the nimble actions of small subunits of the various combat arms.

In the course of any exercises and lessons commanders constantly use precipitous slopes, rivers, gullies, ruins, separate hills, and typical elements of mountain



relief to teach the personnel the technique of crossing various obstacles, movement, river crossings, and so forth.

The running, swimming, and jumps which are practiced everywhere contribute to the generation, in the men, of boldness, dexterity, endurance, and other qualities which the soldier needs for operations in the mountains.

The special features of mountain terrain complicate considerably the operation and use of armored, motor vehicle, and tractor equipment. Therefore, the mountain training of drivers of all types of machines includes the generation of firm skills in driving vehicles in the mountains. Small subunits have the necessary equipment for crossing difficult mountain obstacles and they are able to use means for increasing the trafficability of wheeled and tracked vehicles and special travois for the movement of guns and mortars, the delivery of materiel, the evacuation of wounded, and warming up.

Ascents to test peaks are practiced systematically. The personnel pass the norms of the third sports rating for mountain climbing.

We understand that without purposeful and systematic mountain training of small subunits it is difficult to count on the successful accomplishment of the varied combat missions. In turn, successful mountain training is unthinkable without the presence of a well-prepared training-material base in the permanent disposition areas as well as in the training centers. Constant attention is devoted to their improvement in the district.

An unprecedented political enthusiasm is reigning among the troops of the Red Banner Transcaucasus Military District which is caused by preparations for the 26th Congress of our Leninist party. Socialist competition has been widely initiated. Soldiers and sergeants, warrant officers, and officers are vigilantly following the intrigues of the enemies of peace and are tirelessly raising combat readiness, strengthening discipline, and maintaining firm military order in the subunits and units. Each of them is burning with the patriotic desire to report to the Party Congress on his personal contribution to the cause of raising the country's defensive capability and the combat might of the Armed Forces.

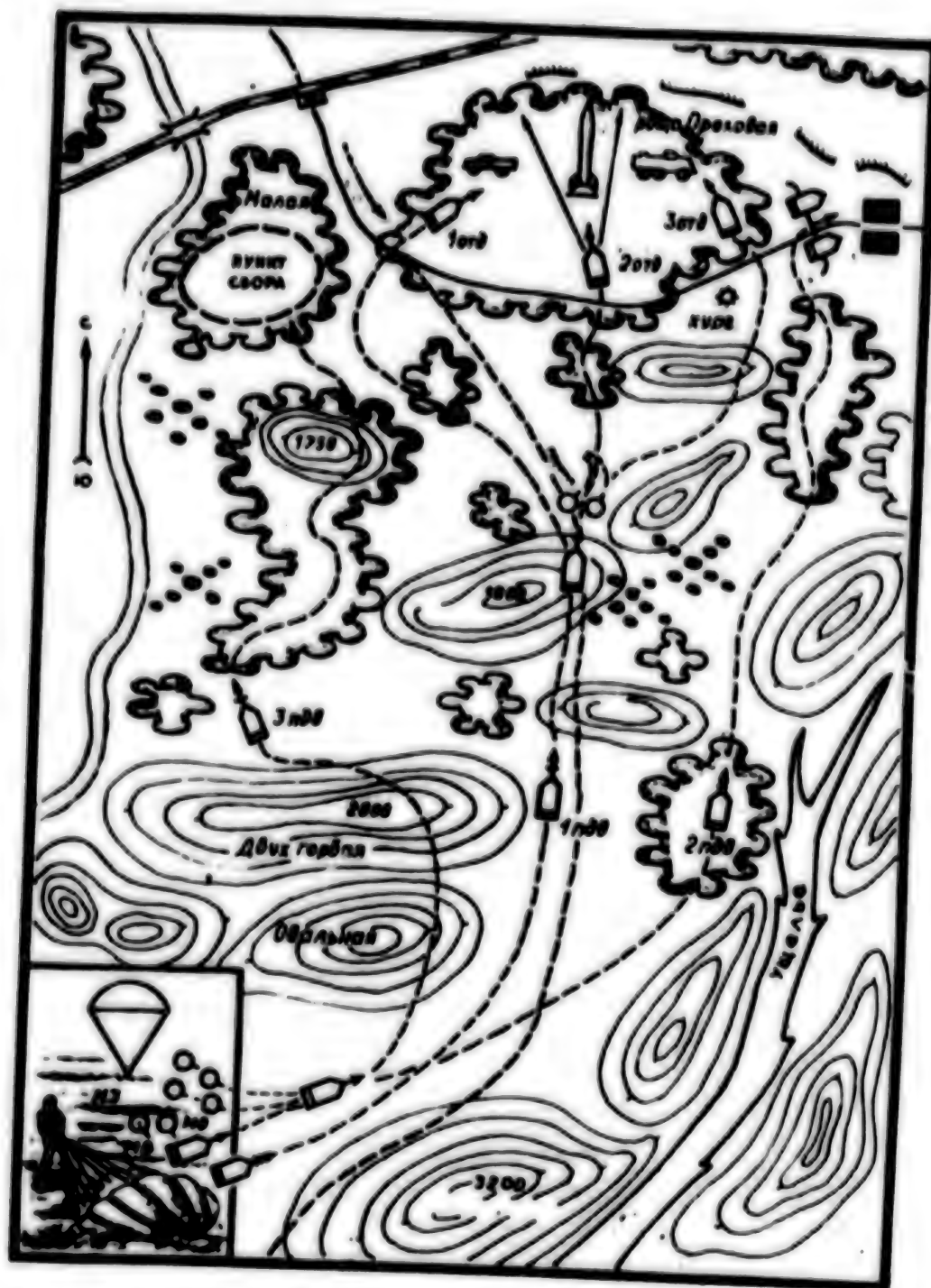
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#### Use of Airborne Troops Described

Moscow ZNAMENOSETS in Russian № 10, Oct 80 signed to press 22 Sep 80 pp 4-5

[Article: "An Assault Landing Force Captures an Objective"]

[Text] The paratroopers of the outstanding company commanded by a resolute, energetic officer, Senior Lieutenant A. Funikov, which joined in the competition for a worthy greeting for the 26th CPSU Congress, are mastering the science of the motherland's armed defense with enthusiasm and are learning to operate in the mountains boldly, decisively, and audaciously. Many times, the wings of military-transport aviation lifted this subunit, the leading one in the VDV [airborne troops], into the sky and the Guardsmen always coped with any assigned mission with honor.





This time, it was to land in the "enemy" rear on a small mountain plateau and reconnoiter and destroy a rocket launcher. Preparatory work preceded the tactical exercise. A number of tactical and marching drill lessons were conducted day and night on which special attention was devoted to coordinated actions under difficult weather conditions, rapid assembly on the drop zone, and thorough preparation of equipment for movement in the mountains.

The BMD [airborne combat vehicle] crews under the direction of the sergeants competed in the rapid unlashings of equipment and its preparation for immediate combat use. The crew of Sergeant Ye. Odintsov, which exceeded the standards by an average of 10-15 percent, emerged the winner. All of the company's specialists without exception acquired firm skills in tightening the tracks in such a way that their droop did not exceed the established allowance.

The paratroopers learned to cross grassy mountain slopes, talus, rocky sectors, and a mountain river, and they drilled in the use of oxygen equipment. The company accomplished a high-altitude flight with subsequent landing on a limited zone on mountain terrain.

...According to intelligence information, the hasty unloading of special equipment and military cargoes is taking place at a railroad station. A column of MP [military police] "jeeps" was observed moving in the direction of the populated center east of Orekhovaya Woods. There are only one road and one path to the populated point in the area of forthcoming combat operations. The absolute altitude of the exercise area is 1,800-3,200 meters. The drop zone was designated on a restricted section of a mountain plateau between three ridges having steep rocky slopes, precipices, and washouts. Two kilometers to the south was a canyon about 800 meters deep. Movement on BMD's was possible only along the mountain path to a ridge, and further freedom of maneuver was conjectural with great limitations. The company's mission was to reconnoiter and destroy a rocket launcher in the indicated square and then to reach the assembly point in Malaya Woods to link up with the battalion.

Landing in the immediate proximity of the probable objective ensured surprise actions, and the heavily broken terrain which abounded in ridges--secrecy of arrival.

The 1st Airborne Platoon (Lieutenant V. Baranov) was designated as the combat reconnaissance patrol, and the second squad of this platoon, commanded by Sergeant Ye. Odintsov--the patrol.

Soon the red-starred aircraft which had embarked the winged infantry soared into the clouds and lay on the assigned course. The aircraft reached drop zone No 3 at the designated time. Landing on a high-mountain plateau had several special features. First, the parachute deployment time is slowed (by two to three seconds) under rarefied air conditions. This leads to an error during the paratrooper's landing. He may land approximately 300-500 meters from the calculated point. Second, the ground speed of the landing increases considerably, and this means that the scattering of equipment and personnel over the area increases.

These special features were considered in the subunit. To avoid great dispersion during landing, the landing density was increased. The paratroopers stood in front of the wide open hatches, pressing tightly against one another, and each of them left the side in some seconds. The Guardsmen skillfully mastered the guided

parachutes which have excellent maneuver capabilities and a broad wind landing range. With such a parachute, a well trained fighting man can select his landing point freely and correct errors in the calculation of the jump. All this permitted the company to accomplish a successful landing on a small abutment close to the "enemy" objective.

Sergeant Odintsov's patrol squad quickly left the zone and, to the extent that the mountain terrain permitted, rushed down the route of the combat reconnaissance patrol. Driver-mechanic V. Nikonov drove the vehicle skillfully. It was necessary to move over the first two kilometers with a large list to the right, skirting around Oval'naya and Dvukhgorbaya Hills. As soon as the BMD emerged on the plant cover and the firm, hard rock, Nikonov increased speed, slowed it on the talus, and tried to avoid turns, for which he lined up the vehicle on some distant reference point ahead of time, before an obstacle, and moved toward it boldly without changing direction. What is more, turning on the talus with a heavy list leads to where masses of stones fall on the inner surface of the track, creating the danger of its breaking. All the paratroopers of the crew conducted reconnaissance in their sectors of observation. Gunner-operator Private First Class S. Bychkov was ready to open fire immediately, a duty which was assigned him on the route when missions were assigned.

Sergeant Odintsov learned from the order of the BRD commander that the "enemy's" combat outposts are located most probably north of Orekhovaya Woods. But nevertheless, without losing vigilance he conducted a thorough reconnaissance. When the situation required, he sent out patrolmen.

Stopping the BMD on the hill's eastern slope, Sergeant Odintsov ordered Privates V. Maslakov and V. Ivanov to move out ahead and examine the ground which lay ahead. The scouts quickly reached a group of stones from which it was convenient to conduct observation. The commander of the patrol vehicle soon saw in an instrument how the senior patrolman, Private Maslakov, carefully raised his assault rifle with the barrel upward, swinging it forward several times. Sergeant Odintsov understood the prearranged signal: a lone "enemy" soldier had been noted and the patrolmen were requesting permission to capture him. The crew commander sent "good." The remainder was decided by speed, military cunning, and the skill of the scouts. Using folds in the terrain and natural cover, Privates Maslakov and Ivanov stealthily approached the soldier who was in the brush not far from a mountain path, and here they noted that he was not alone. It was a two-man patrol! The paratroopers had no other solution but to operate boldly and resolutely. In order to distract the attention of the "enemy" soldiers, Maslakov threw a large stone far, catching a nut tree branch with it. The patrolmen turned sharply toward the noise, turning their backs toward the scouts....

Cursory interrogation of the prisoners and their documents confirmed the presence of a missile subunit in the vicinity. One of the soldiers even pointed out the launcher's position--in a small clearing in Orekhovaya Woods.

The BMD drove up. Sergeant Odintsov examined the woods through the sight. A cone-shaped missile warhead (actually, it was an inflated rubber mock-up) rose above the tops of the trees directly along the course.

Sergeant Odintsov immediately reported to the BRD commander about the captured soldiers, their evidence, and the results of personal observation. Lieutenant Baranov made a decision: the patrol squad is to attack directly; the first--to strike on

on the left, from the direction of the junction of the country road and the mountain path, reliably cutting the "enemy's" path of withdrawal in this direction; the third --to emerge at the mound and attack on the right flank, cutting off the path to the populated place.

The sudden, audacious actions of the paratroopers brought success. The crew of the patrol BMD rushed toward the launch position. The gunner operator, Private First Class Bychkov, fired the first round at the missile itself which was located on the launching platform. The other paratroopers opened accurate fire against the "enemy" soldiers and special equipment....

"Excellent"--this was the grade which the senior commander assigned to the paratroopers at the concluding stage of the competition of the jubilee year.

Initiating a struggle for a worthy greeting for the 26th Congress of their own party, the Guardsmen soldiers are increasing successes from day to day in combat and political training, are strengthening combat readiness, and raising their military skill from month to month.

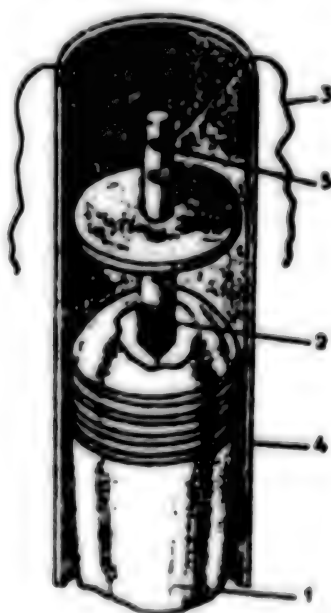
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#### Device for Traversing Gorge Described

Moscow ZNAMENOSETS in Russian No 10, Oct 80 signed to press 22 Sep 80 p 5

[Article: "For Battle, For Victory"]

[Text] Difficult terrain sectors--rivers, canyons, and gorges--are encountered in the mountains. In order to traverse them more rapidly, motorized riflemen are often forced to lay cableways. The cable or capron cord can be quickly thrown across the obstacle and fastened on the other side using the organizational weapons of the subunits.



For this purpose, officer V. Legkoyt proposed using 82-mm or 120-mm mortars. Screwed into the mortar round (1) instead of the fuse is a piston-pusher (2) with a diameter of 80 or 118 millimeters (see figure) having a shaft with holes (3) for the capron cord or cable (3). On firing, the piston ejects the cord, preventing its landing in the space between the wall of the tube (4) and the casing of the mortar round (1). The ends of the cord are laid to the right and left of the mortar in the form of a spiral, which ensures their easy uncoiling during the flight of the round. It is important to select the crossing point correctly. The reliable catching of the cord or cable on the opposite side of the obstacle is furthered by numerous trees and stones.

The range of flight of an 82-mm mortar round from the ignition cartridge with the capron cord, which withstands a tensile strength of up to 800 kilograms, is 300-500 meters, and of a 120-mm mortar round with a capron cord which withstands a tensile strength of 1,400 kilograms--up to 500 meters.

The use of such devices reduces considerably the time to cross obstacles, furthers the effective delivery of ammunition and equipment, and increases the maneuverability of subunits.

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#### Use of Helicopters Described

Moscow ZNAMENOSETS in Russian No 10, Oct 80 signed to press 22 Sep 80 p 4

[Article: "From Helicopters--Into the Assault"]

[Text] In order to prevent the exit of the opposing side's reserves, the "enemy" hastily occupied a small pass. The motorized rifle subunit where Senior Lieutenant V. Rantuyuk serves was assigned a mission--to operate in a tactical airborne assault. It was to disembark from helicopters in the "enemy's" rear on the eastern slope of the commanding height and ensure coordination for time and place between the airborne assault force and the flanking detachment and come out toward the indicated height. Then, it was to destroy the defenders by a decisive attack in their flank and rear and capture the pass.

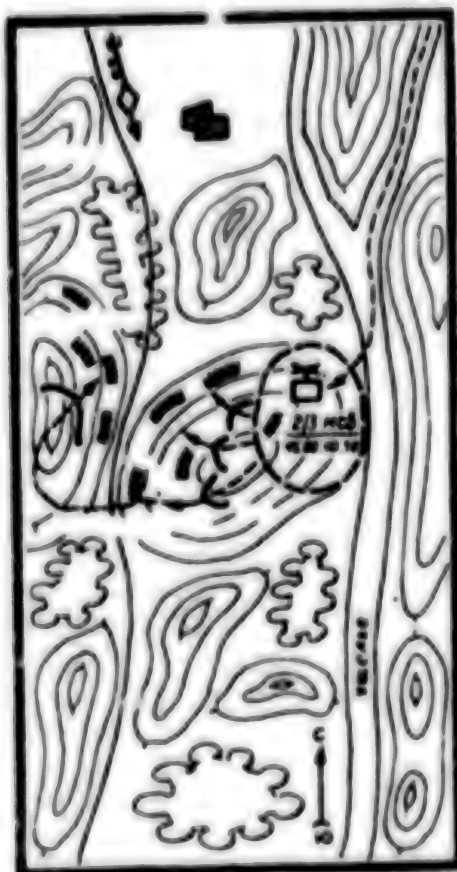
Designated for the airborne assault force was an initial point, flight zone which includes a section of a deep gorge at its concluding stage, and a primary and alternate landing zones. According to intelligence information the "enemy," envisaging a possible assault force landing, established obstacles on the areas most convenient for this. The company commander made the decision to land in the indicated area without landing the helicopters, from low-altitude flight. This provided a number of advantages: it reduced the disembarkation time, attained great surprise of actions, and most important--the "enemy" was deceived concerning the true intentions of the assaulting troops. Of course, he could notice the appearance of the helicopters however sudden it may be (even if the rotary wing aircraft follow the canyon). But it is difficult to understand what the attackers are undertaking: the helicopters are not landing on the ground. It can be presumed that they are only executing a maneuver against antiaircraft weapons or only trying to disembark an assault landing force.



Naturally, the officer's decision was not blind. It was based upon the actual capabilities of the subunit and the corresponding training of the motorized riflemen. The company conducted many drills on the eve of going out on the tactical exercise. First, the soldiers accomplished jumps with complete combat pack onto even ground from a two- and three-meter tower. Then the exercise was made more difficult. The trainees accomplished the same jumps, but this time under conditions which approximated actual ones--onto ground with slopes downward or upward.

"It is best to jump facing the slope," the commander of an excellent squad, Senior Sergeant A. Vededejev, explained. "In this case, the body's attitude will be more stable. But it should be remembered: land on the toes with the legs bent so that they give. Hold the assault rifle by the barrel beneath the foresight bracket. It is easier this way: in case of necessity you can lean upon it. If you lose your balance you can fall and drop your weapon. It's another matter if there is fine talus under you. Then you should drop on the heels of half-bent legs, as if burying yourself in loose soil and braking the inertia of the fall."

Firing drills in conducting fire from authorized weapons from on board helicopters also proceeded fruitfully in the company. Here, squad leaders learned to control the fire of their subordinates and to accomplish missions on the destruction of targets with the greatest effectiveness. In truth, this was also a special feature of the present stage of socialist competition in the jubilee year--a persistent struggle for the skillful mastery of contemporary combat equipment and armament and for their effective use. As a result, the company emerged among the excellent subunits, worked out the training missions and standards with high results, and had stable successes in political training from month to month.





...The rotary wing aircraft flew above the canyon at the lowest possible altitude. Skirting the dominant height, they began to climb.

"Prepare to fire from the right and left sides!" Senior Sergeant Vedeneyev gave the command to the squad. The squad leader glanced over the terrain cursorily looking for big, easily noticed reference points on it. There is the road through the pass. Below--the commanding height. On its military crest which faced the direction of the approaching helicopters directly--a small trench occupied by soldiers.

"At the infantry--fire!" commanded Senior Sergeant Vedeneyev and he fired an accurate burst at the target. He was immediately supported by the other automatic riflemen and the squad machinegunner. In the next minute, Senior Sergeant Vedeneyev abruptly opened the jump door, grabbed the assault rifle in the right hand, and jumped down with the shout: "Squad, attack--forward!" The others left the side of the helicopter behind one another after him. And on the ground, they immediately formed a skirmish line. Several "enemy" soldiers came in sight from behind a pile of stones. Fire was opened up on them from the helicopter from the onboard weapon, supporting the assault force which had landed. With a loud shout of "Hurrah," the motorized riflemen knocked the defenders out of the trench with a decisive and bold attack in their flank. Meanwhile, the flanking detachment also entered the battle. It struck the "enemy" in the rear. And then the small Shalakh Pass was captured. The path through it was open for the attacking subunits.

"By our success in the exercises," said Senior Sergeant Vedeneyev, "we made a contribution to the common cause of the struggle for a worthy greeting for the 26th CPSU Congress."

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#### Motorized Rifle Company Tactics Described

Moscow ZNAMENOSETS in Russian No 10, Oct 80 signed to press 22 Sep 80 p 7

[Article: "Snipers in the Sight"]

[Text] The motorized rifle company where a squad leader is Sergeant N. Aliyev, reinforced by a platoon of flame-throwing tanks, executed a march along a mountain road. By 1300 hours it had reached Glubokoye Canyon. Reconnaissance which had been sent out ahead reported to the subunit commander that the route was quiet and movement could continue. But as soon as the head of the column entered the canyon, "enemy" assault rifles struck from the southwest slope of Dlinnaya Hill.

The company commander understood that this firing would not damage the tanks or the infantry combat vehicles. It was possible to avoid engaging the insignificant "enemy" forces, too. But another subunit was moving behind the company. Wheeled vehicles predominated in its column. And it could not be excluded that when they enter the canyon, the "enemy" would open fire on them. Unquestionably snipers who were sown on the hill, in caves, and in depressions and crevices will hit the wheels and fuel tanks of the vehicles. Then the drivers and other soldiers will begin to jump from the vehicles. Of course, the "enemy" snipers will find themselves in a more advantageous position. It is difficult to discover them in the mountains. The advantage of high ground which permits conducting observation better, changing firing positions covertly, and conducting accurate fire will also be on the side of the snipers.

Making an estimate of the situation, the company commander ordered the commander of the platoon of flame-throwing tanks to destroy the "enemy" snipers. Warrant Officer [praporshchik] V. Alikperov assigns the mission to the tank commanders using the TPU [tank intercom system]. Another minute--and there, the combat vehicles have already occupied firing positions. Sergeant A. Kerimov, Junior Sergeants V. Aloyan, F. Aliyev, and other tankers look closely at the folds in the hill and strive to determine the snipers' locations more rapidly.

From the reports of the tank commanders, Warrant Officer Alikperov quickly calculated the sector on which fire should be opened. One more second, another--and powerful streams of fire flew toward the slope of the hill. The dull-colored grass burst into flame, and boulders and slopes were wrapped in flames. The "enemy" fell silent.

Meanwhile, the subunit's column had already approached the canyon exit. The company commander determined the firing positions of three "enemy" snipers from shots. They were located behind rocks at a considerable distance from each other. It made no sense to destroy them with the flame-throwing tanks. The subunit commander made a different decision. Without stopping the movement of the subunit's column, he ordered one of the platoons to destroy the "enemy" snipers by fire from in place.

An infantry combat vehicle with snipers on board approached to the effective range and stopped. The gunner-operator, Private M. Dzhabarov, opened fire on the "enemy" snipers. And meanwhile Privates M. Salakhov and S. Khasratov, under the command of Junior Sergeant F. Aliyev, dismounted without delay and occupied firing positions unnoticed.

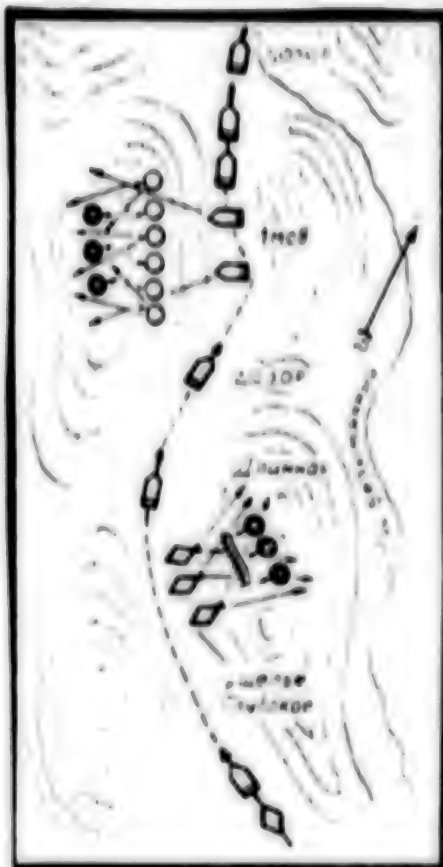
Private M. Salakhov was the first to discover the target. The sniper was located among a pile of rocks and gave himself away by the flash of a shot. Private Salakhov is one of the best snipers in the subunit. He needed literally seconds to destroy the target. Having fired, Private Salakhov quickly and covertly changed his firing position. The soldier did not do this by chance. He understood that other "enemy" snipers would not delay in taking him in their sights. And this is what happened. The echo of the shot fired by Private Salakhov had not even grown silent in the mountains when a flash glared from the slope of the hill. However, the "enemy" sniper erred: Salakhov had already made his way to another position unnoticed.

Meanwhile, Private Khasratov noticed the flash of the "enemy" sniper's shot and immediately sent a bullet in his direction. It proved to be accurate. One of the three "enemy" snipers remained. He did not begin to give himself away and concealed himself. But where? Sergeant Aliyev and Privates Salakhov and Khasratov were attentively observing the terrain and looking at each stone, each crevice, until their eyes ached.

And suddenly, something glittered behind the distant boulders. Probably, the optical sight of an "enemy" rifle sparkled in the sun. The flash was quick as lightning. But gunner-operator Private Dzhabarov managed to notice it and fired on the spot. The "enemy" snipers had been "destroyed." The path was open for the column.

What does the lesson which was conducted tell us? First of all, about the skillful actions of the commander of the motorized rifle company. He distributed his weapons correctly to combat the "enemy" snipers. He used the flame-throwing tanks to fire against cover which had received engineer strengthening. Neutralizing the caves, permanent pillboxes, and other cover of the opposing side with fiery sheets, the

subunit commander created an entire fiery sector from which the group of "enemy" snipers found it impossible to escape.



In the second case, the company commander decided to use the snipers of his subunit supported by the weapons of the infantry combat vehicle to neutralize the "enemy" snipers. It was inexpedient to employ flame-throwing tanks against the insignificant "enemy" forces. Moreover, his riflemen were not disposed in cover which had received engineer improvements. They took cover, as has already been said, in small folds of the terrain.

The lesson showed the increased skill of the men and their ardent striving to achieve new successes in socialist competition which had been initiated in honor of the 26th CPSU Congress. The tankers, for example, conducted accurate fire against the "enemy" despite a lateral wind. The motorized riflemen also operated skillfully and with initiative. They detected the targets in good time, hit them with the first rounds and at maximum range, and demonstrated good fire coordination. Thus, along with the improvement in tactical training the personnel of the subunit learned to accomplish firing missions competently under difficult conditions.

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### Pre-Exercise Preparations Described

Moscow ZNAMENOSETS in Russian No 10, Oct 80 signed to press 22 Sep 80 p 8

[Article by Warrant Officer L. Mkhitaryan, senior company technician, Red Banner Transcaucasus Military District: "Before a March"]

[Text] Our company's personnel prepared especially thoroughly for the forthcoming exercises in the mountains. The motorized riflemen perceived the decree of the party's Central Committee, "On socialist competition for a worthy greeting for the 26th CPSU Congress," as a combat program for action. The driver-mechanics of the BMP's [infantry combat vehicle] pledged to prepare the training-combat vehicles in such a way that their units and assemblies would operate faultlessly on mountain routes. And the men kept their word. The results of the exercises showed that we accomplished the obligations successfully. In this, a large role was played by the fact that in preparing the equipment the specific conditions for its operation were considered.

As is known, when moving over mountain roads the running gear experiences the greatest loads. Therefore, the specialists thoroughly checked the good working order of the track shoes and the track pins, the condition of the shock absorbers and other units, and the presence of grease in the wheel bearings and bogies. The men were convinced of the good working order of the running gear and accomplished a series of preventive work. Thus, Private F. Zagvozdkin discovered a crack on one of the track shoes and thereby prevented a possible breakdown. And the squad leader, Sergeant I. Abbasov, helped him to replace the track shoe more rapidly.

Squad leaders and gunner-operators are regularly involved in the repair of the running gear, the power plant, and other assemblies. In the course of combat operations, when each minute will be dear, the acquired repair experience will permit the crew to eliminate various malfunctions and damage effectively.

The company's senior driver-mechanic, Private S. Guseinaliyev, also participated in preparing the equipment for the march. But his role was reduced more to checking the correctness of the work conducted. A competent specialist, Guseinaliyev enjoys indisputable authority among the motorized riflemen. And I always entrust him with checking the many operations to be performed without hesitation.

Movement in mountain terrain is accomplished with increased shaking of the BMP on rocky sectors and by severe strikes against rocks on slopes. Therefore, in the course of the inspections we devoted attention to the tightening of the fastening bolts, the integrity of the hose connections, the joining of the tubing of the power-supply, lubrication, and cooling systems, the fastening of the storage batteries, and so forth.

In accomplishing these operations I check the less experienced motorized riflemen more strictly. And here is why. I have remembered all my life the blunder committed by a young soldier one day. At that time, we were also preparing for regular exercises. A driver-mechanic who had recently arrived in the company reported the combat vehicle's readiness for a march. However, during a check it turned out that the soldier had not emplaced the slide blocks which fasten the storage battery. In



movement, this could lead to a situation where the battery, shifted from its place, could break the wires leading up to it.

We checked just as thoroughly the reliability of the connection and adjustment of the drives for controlling the engine, turning mechanisms and brakes, and also the condition of the power plant and the power supply system.

The operation of assemblies and units of the power plant under high mountain conditions and numerous upgrades and downgrades is associated with increased mechanical and temperature loads. The working mixture becomes overenriched because of the air's rarefaction. This causes incomplete combustion of the fuel and smokey exhaust. Power drops and the engine may overheat.

On the march, an experienced driver-mechanic maintains the necessary coolant temperature through the correct selection of the power plant's operating conditions depending on the speed of movement and the condition of the ground. This is more difficult for the young soldiers to do. Not only their lack of experience in driving, but also careless servicing of the equipment is frequently felt. The engine became overheated in the BMP of Private R. Kuliyeu who recently joined the company. And the reason proved to be simple: there was a lot of dirt and dust on the screens to protect the water and oil radiators. I considered this when preparing for the march. First we blew through the radiator screens of the BMP's with compressed air, then flushed them with water, and removed the dirt particles which remained in the cells with a fine wire.

After eliminating the troubles which were disclosed during the technical inspection, I adjusted the brakes and the tension of the tracks. All operations were conducted competently. And much here is to the credit of Private Guseinaliyev. On the eve of the exercise, he and the driver mechanics performed the necessary work on each vehicle. The steam valves were set at the upper limit in a qualified manner.

During operations in the mountains, it is also necessary to consider frequent weather changes. Thus, if it was raining in a valley, this means that it is snowing in the pass. The sun shows through and this snow will blind the eyes, hampering the driving of the vehicle. Therefore, I checked the presence and good condition of the dust and sun protective goggles as well as the observation instruments. We replaced those which had scratches.

For the success of the march, the personnel must be well prepared for independent conduct of repair work. For this purpose, officers Yu. Drobyshev and V. Klimenko conducted lessons with the motorized riflemen where specialists analyzed methods for eliminating individual troubles and malfunctions which are typical of mountain routes.

On lessons in the technical study group, I concentrated the men's attention on the practical accomplishment of individual operations. I began talking about the actions of Private P. Akhmedov on one of the recent exercises. He was late in noticing a turn because of a cloud of dust which was raised by the vehicle moving in front and he braked suddenly. As a result, a brake band burned. But the driver-mechanic did not become confused: he performed the necessary repair independently and quickly. Privates S. Guseinaliyev and F. Zagvozdkin operated just as clearly when they helped Private A. Yurkovskiy to put a track in its place.

I was not worried about the experienced motorized riflemen, but our young soldiers were to check their knowledge in practice once more in the course of the lesson being conducted. Simultaneously with the conduct of individual work--flushing the oil filters for coarse and fine cleaning--I called the attention of the soldiers to the correctness of installing the sealing gasket beneath the filter lid; when replacing the bogies, brake bands, pins, and track shoes I checked the quality of performing the operations in the disassembly and assembly of the units and the competent use of tools and accessories. Perhaps, the same Yurkovskiy will not have to change a bogie or brake band in the course of a march. But he must be prepared for such an operation. Our practical lesson in the study group also contributed to this.

Another time, we analyzed in detail the methods for self-recovery, towing, and using mountain backstops and blocks with the company's driver-mechanics.

Along with checking the materiel and polishing the technical knowledge and skills of the personnel in the subunit prior to the march, we worked out various questions connected with driving combat vehicles in the mountains. For any what at first glance is a small omission may disrupt the accomplishment of the assigned mission.

The experience accumulated in our subunit tells us that only comprehensive, complex preparations with consideration of specific local conditions leads to success in the end. There were no equipment failures in the course of the march. And this is to the credit of all the motorized riflemen.

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#### River Crossing Methods Discussed

Moscow ZNAMENOSETS in Russian No 10, Oct 80 signed to press 22 Sep 80 p 9

[Article by Sgt A. Rotashnyuk, leader of outstanding squad: "Across a Swift River"]

[Text] The negotiation (assault crossing) of mountain rivers occupies a special place in the combat coordination of small subunits. It brings training as close as possible to the conditions of actual combat and permits working out the most effective crossing methods, improving the elements of coordination of the squads, sections, and crews, and tempering the personnel psychologically.

At the same time, the negotiation of water obstacles on mountain terrain has a number of special features and difficulties. And we, the sergeants, consider them during combat training.

As a rule, mountain rivers are shallow. But in the summer, the water level in them rises sharply due to the melting of glaciers and, in the autumn, in the period of pouring rains. They are transformed into stormy, swift streams which carry sharp rocks and the debris of trees. The possibility of fording the rivers is eliminated. The lowest water level occurs in the spring and autumn in dry weather, and in the summer--in the first half of the day, that is in the cool part of the day. Then the melting of the glaciers and snow is slowed.

The figure shows three training sites and a rescue post on a mountain river. At the first of them, training of the personnel took place in fording an obstacle with a

safeguard using a pole, single file, in ranks, formed in a circle, and along a rope which has been stretched across. At the second training site the motorized riflemen learned to cross a river on projecting rocks, a log, and suspension bridge. At the third, methods were worked out for crossing personnel, weapons, ammunition, and other cargoes using a mountain rope, special blocks, and a rope seat.



A special feature of this exercise consisted of the fact that drills were first conducted in a dry channel. This gave the trainees the opportunity to master clearly various procedures and crossing methods, acquire confidence in their actions, and attain coordination.

Beginning the lessons at the first training site, I briefly explained that fording is accomplished only where the depth is no higher than the waist. It is easiest to look for a ford on a sector where the river divides into several channels, and it is more convenient to cross it at its widest point, before it divides. Here, the flow is calmer and the depth is less. If the water is up to the knees, the obstacle can be crossed without a safeguard, but if it is up to the waist--with a backup safeguard. With the depth above the waist the crossing is accomplished above the water, along a fallen tree (log), with a safeguard using handrails, over rocks protruding from the water, and along a rope.

I tied one end of a rope to a chest binding and gave the other to a soldier on the bank for a safeguard. I took a pole in my hands and began the crossing, giving brief explanations. Here, I called special attention to the fact that the feet were not separated from the bottom but were in close contact with it. Then the current presses the foot to the bottom and helps to preserve a stable position. It is sufficient to relax the foot slightly, and the water will knock it to the side at once--balance is lost. I also showed possible separations and errors and the effectiveness of a safeguard using a pole. It should be carried out only against the current, preserving three points of support without fail.

The trainees repeated my actions with the pole, and then the other crossing methods were worked out sequentially. At first, the exercises were accomplished without weapons and march equipment, in boots put on bare feet (in order not to injure them against the rocks and keep the socks dry), and then--in full equipment. The crossing rules were strictly observed. Movement into a column, rank, or circle was not accomplished in step, and the soldiers learned not to look at the water to avoid dizziness. During movement by the circle method, the line guide moved against the

stream (general movement along the circle). This permits maintaining the greatest stability and, most important, increases the intensity of the crossing.

Naturally, there was no getting by without some errors committed by the trainees. Private E. Maksimavichyus lost his balance when crossing the river using the column method and became uncoupled from the waist strap of his comrade in front. In trying to keep his place, the soldier wanted to rest his knee against a rock projecting from beneath the water. But he pulled his leg back suddenly, subjecting himself to even greater danger of falling in the water. On the spot, I pointed out to the trainees two mistakes which had been committed and the serious consequences to which they could lead, and I explained that when losing balance in no case should one leave the common safeguard and, what is more, it is categorically forbidden to rest the knee or hand on the first stone that turns up. One may not notice its sharp projections and become severely injured (movements are abrupt and careless in searches for support), and can lose consciousness from the sharp physical pain.

In working out the procedure for fording along a stretched mountain rope, Private K. Gudaylis, who was best trained, was the first of the trainees to the other bank using a pole. He fastened the ends of a double-folded rope to a tree which had been cut down on the opposite bank. He stretched the rope in such a way that it did not touch the water, and the squad began to cross the river. The soldiers moved along the rope in a rank with an interval of about a meter with steps fixed against the current, holding the rope with the hands and attached to it with the aid of a loop or carabiner.

The squad's drill as part of a platoon at the second training site began with a demonstration of possible disruptions and errors when crossing over rocks which are projecting above the water and over a log along a stretched mountain rope and also over a suspension footbridge. The demonstration was conducted by a staff officer, Senior Lieutenant S. Yakimchuk. I know from experience that this methodological procedure is effective psychologically. For when the trainees are convinced that they can emerge from any dangerous situation, they develop confidence, resolve, and boldness. This is how it was this time, too.

The squads, under the direction of the sergeants, learned one of the crossing methods listed and, as they mastered the procedure, on signal of the platoon leader they began intensive actions, competing with each other for speed and quality in the accomplishment of the exercise.

At the end of the lesson, the company commander conducted a 10-minute combined drill in which the subunit, at full strength and employing simulation means and firing blank cartridges, made an assault crossing of a mountain river with all the procedures and methods worked out on the lesson. The senior commander, who was present, announced his thanks and assigned a grade of "excellent" for its actions.

The men are striving to complete the training year well, to accomplish their tasks in a conscientious manner, and to greet the 26th CPSU Congress in a worthy manner.

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## Cliff Scaling Methods Described

Moscow ZNAMENOSSETS in Russian No 10, Oct 80 signed to press 22 Sep 80 pp 10-11

[Article: "The Cliffs Submit to the Bold"]

[Text] Operating in an enveloping detachment, the subordinates of Warrant Officer [praporshchik] S. Avakyan demonstrated excellent combat training and ardent striving to please the beloved motherland with new successes in soldierly labor and in socialist competition for a worthy greeting for the 26th CPSU Congress. They negotiated high, almost perpendicular cliffs and struck the "enemy" where he expected it least of all. Operating especially skillfully were Sergeants F. Akhmetov, V. Salakhov, V. Selin, A. Loza, and A. Fedorchenko, Privates Yu. Dzhaharov, A. Gerasimov, S. Khasratov, A. Poladov, and others. Their success is to the great credit of the instructor in mountain training, first-class mountaineer Warrant Officer [praporshchik] V. Zhavoronkin. The journal's travelling editors requested him to answer several questions connected with the procedure for training the men to negotiate mountain obstacles.

[Question] Where does one begin to train for negotiating cliffs?

[Answer] With the study of people. It is important to learn as well as possible about their physical tempering, special features of their character, moral-psychological qualities, theoretical training, and whether they have practical experience. I pay special attention to finding soldiers who are afraid of heights and mountains and have a distrustful attitude toward the reliability and strength of mountain outfits and equipment. For you see, there are those who have never been in the mountains, in whom even a low hill takes their breath away, to whom it seems that the rope is too thin and will hardly endure during climbing and descending on a cliff and a hook driven into the cliff may jump out.... In short, they are afraid of mountains, feel timid and unconfident....

[Question] How can they be helped to overcome timidity?

[Answer] This is not an easy matter. Studying people well, I do much individual work with them. The main and most reliable medicine against all these "sicknesses" consists of persistent, systematic drills, first on training grounds and then directly in the mountains. Everything is done in strict sequence. First, I teach them to negotiate confidently small, low, easily accessible obstacles and cliffs, and then--steeper, higher, and more difficult. And the soldiers gradually become accustomed to the mountains and confidence appears in their actions.

Here, for example, Privates Yu. Dzhaharov, V. Vardanyan, A. Gerasimov, and A. Poladov operated well in the flanking detachment. And you see, at first they were afraid to approach the edge of a cliff and some even became dizzy. Some of them did not venture to run across a suspension bridge across a mountain river, to descend from a low cliff by rope, or to cross a canyon on a stretched rope.

As a rule, I begin the instruction of procedures which require of the men resolve and boldness--let us say, descent along the wall of a cliff with the aid of a rope or climbing on "crampons" along a steep, icy slope--by demonstrating the reliability of the equipment which is used here. Then, I move on to demonstrating the procedures with the aid of which the planned obstacle will be negotiated. Along the way, I explain the technique for its accomplishment.

I try to convince the soldier that a hook which is well driven into a crack in the cliff provides complete safety and that it is difficult to pull out such a hook even employing considerable physical strength. I also try to convince them that the rope, which appears to be thin, is very strong in fact, reliable, and can bear not one, but even several men, that when descending on a rope one can stop at any moment, and that self insurance with the aid of a "grabbing" knot is reliable and, in case of disruption, will not let them fall. I offer the trainees the opportunity to be convinced of everything based on their own experience. And this provides a good result without fail: the men begin to accomplish exercises of any difficulty more confidently and boldly.

I repeat: one should approach soldiers who display fear in accomplishing the procedures of mountain training with special attention. Working without peremptory shouts and without long lectures but by means of the correct selection of various preparatory and special exercises, the trainees should be brought up to the confident accomplishment of difficult procedures in negotiating mountain obstacles. Here, it is not a bad idea to use a competitive situation which causes great interest in the lessons and the striving to accomplish the procedure as well as possible, and it also contributes to the development of volitional qualities.

For example, we can compete to see who moves over the talus with various slope steepnesses more cautiously and accurately and does not release stones, who cuts out a step or a number of steps with an ice ax with the least expenditure of time and strength, and so forth.

Of course, during the lessons one should constantly see that safety measures are strictly observed and, in evaluating the results, that attention is paid not only to the speed and correctness in accomplishing a procedure but, primarily, to the reliability of the safeguard.

[Question] What should always be remembered in climbing cliffs?

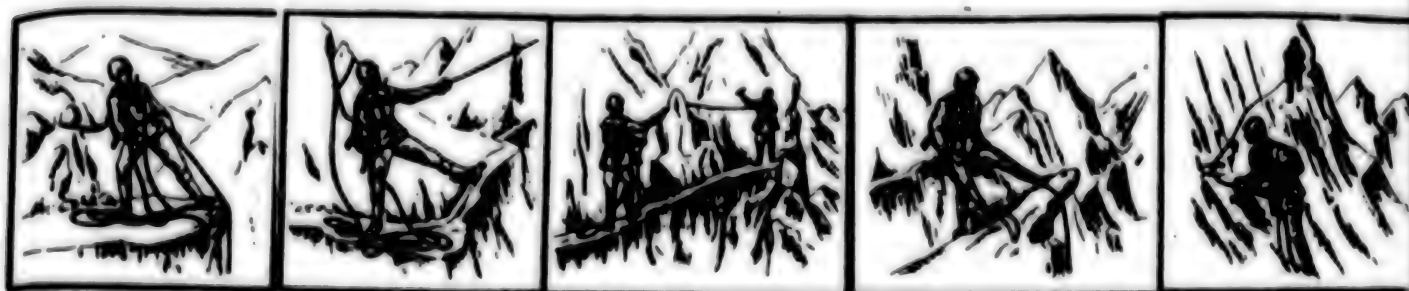
[Answer] The main rule should never be forgotten: maintenance of the three points of support (on two legs and an arm or on two arms and a leg). This appears specifically as follows: with support on two legs and gripping with the left hand--shifting the right arm; with support on the right leg and gripping with both hands--shifting the left leg, and so forth. This simple but very important rule has been worked out with the experience of many years. Its strict observance guarantees safety when climbing on cliffs and walking in the mountains and permits negotiating confidently the most difficult rocky sectors. Unfortunately, some too bold, self-confident men sometimes ignore this rule and try to move in the mountains with only two points of support and usually suffer failure. Why? Because they may fall because of straining a leg or arm and easily lose their balance due to an unstable center of gravity.

It is recommended that movement in the mountains be uniform, without haste or jerks. On small rocky sectors, in the absence of convenient projections and cracks, one

should crawl up and down slowly, placing the entire body close to the cliff. Before undertaking one or another cliff projection, one should be satisfied concerning its reliability, clear away small pebbles, and use it as a support only after this. Before placing the foot one should check the firmness of its placement and whether the stone will break away. It seems as though everything is simple. But there are instances where this is disregarded. The following error is also committed: they lean upon the knee or elbow. This must not be done in any case for it is very dangerous: a sharp stone or projection of the cliff may land under the knee or elbow, a strong sensation of pain arises suddenly, and the hand or leg is instinctively jerked backward; a break-away or fall occurs....

[Question] On what else do reliability and confidence of actions in the mountains depend?

[Answer] A strict sequence in mastering the technique of cliff climbing is necessary. Without mastering the rudiments of mountain climbing which are assimilated on drills on the training grounds and especially on low cliffs, there can be no moving on to negotiating cliffs of the medium category. There can be no beginning to climb cliffs of the last category without having learned to climb a cliff and descend from it using a rope, in so doing using the corresponding types of knots and various types of safeguards.



Some soldiers have a scornful attitude toward lessons on cliffs of low complexity. In vain! For it is namely on them that various safety techniques are worked out: across a projection of a cliff, the waist, shoulder, and using a hook (see figures). Training is conducted here in employing self-protection using a "gripping" knot. Great significance is had by the soldier's ability, when employing safeguards across the waist and across the shoulder, to find a reliable supporting point and to take up the rope in good time without delay. I also want to turn attention to the following point. I have had the occasion to note that in training on cliffs of low complexity individual presumptuous soldiers do not employ safeguards, evidently believing that they can get by without the safeguards on low cliffs. A dangerous delusion! With such actions they dampen their ardor, develop a dangerous habit, and subsequently do not employ the safeguards even on cliffs of medium complexity which, unquestionably, is fraught with serious consequences.... But experience shows that it is not recommended to take even one step without constant safeguards.

In speaking of the safeguards, the following important detail should be stressed. When climbing a cliff the "gripping" knot should always be ahead and it must constantly move along the main rope. The following rule is in effect here: the higher the knot is extended along the rope, the less one must drop during fall. When

descending on a "fireman's knot," one must twist the carabiner just as when climbing, and an upper safety line and mittens are necessary; otherwise, the hands may be burned during descent. It is mandatory to use a safety line when emerging at the top of a cliff: for the head may begin to spin, one can accidentally stumble or fall....

[Question] What should be said about the clothing of those who intend to storm the cliffs?

[Answer] It should be in good condition and strong. Literally everything is checked very carefully. There can be no minutia here. But the safety ropes, belts, carabiners, sharpness of the prongs on clasps and of the cleats on the boots, and the satisfactory condition of the ice ax must be inspected especially attentively. Clothing is selected according to the exact size; it should be free and not hamper movement. Everything must be properly checked and fitted ahead of time, for it will be late to do this in the mountains. I cannot fail to mention weapons. However difficult it may be, the weapons must be protected against blows, dust, and moisture. Both the soldier and his weapon must always be ready for battle.

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#### Planning a Flanking Movement Outlined

Moscow ZNAMENOSETS in Russian No 10, Oct 80 (signed to press 22 Sep 80 p 11

[Article by Warrant Officer S. Avakyan: "In a Flanking Detachment"]

[Text] The mission facing our motorized rifle company was difficult. Operating in a flanking detachment, we were to envelop an "enemy" strong point and, by an attack from the rear, contribute to the successful attack of the main body.

I knew from experience that the successful accomplishment of the assigned mission is furthered to a great extent by the ability of the soldier to become oriented in a difficult situation quickly and negotiate various mountain obstacles. This ability is attained in the course of daily lessons under conditions which are as close as possible to those of actual combat. I try to create just such a situation on the lessons.

Receiving the mission from the company commander, using a map I attentively studied the order of my platoon's actions at various stages of the training battle, and especially on the lines of a probable meeting with the opposing side. And such a meeting was not excluded. Although the "enemy" also understood that a strike against his strong point across a sector of high, steep, almost vertical cliffs is possible least of all, he nevertheless did not leave this direction without cover and detailed some part of the forces. But our company commander also envisioned that the "enemy" could be found even on such a rather inaccessible direction and, therefore, he adopted necessary measures to support the successful operations of the flanking detachment.

In assigning the missions to the platoon leaders, he devoted special attention to the organization of coordination. The concept was that each platoon supports with fire the advance of the adjacent unit. This is what pertains to coordination between



platoons. But it would be incorrect for me, as a platoon leader, to count only on the adjacent unit on the right or left ensuring my subordinates' successful forward advance. It was also necessary for me, myself, to be concerned about the organization of coordination in the platoon. This is why, when assigning the missions to the squad leaders, just as the company commander I devoted serious attention to this important question.

Using a map, I drew a sketch of the terrain on the line of probable encounter with the "enemy." Using conventional symbols, I defined the missions for each squad with its aid. They were as follows. The first to begin negotiating a vertical cliff wall was the squad of Sergeant G. Guliyeu. At this time, the squads of Sergeants S. Guseynov and V. Salakhov occupied positions which provided a good view of the entire ascent and were in readiness to cover Sergeant Guliyeu's squad with fire in case the "enemy" was encountered. The second to climb was the squad of Sergeant Guseynov. Its forward advance was covered by Sergeant Salakhov's squad which was to begin the climb at the same time that the first squad reached the planned position from which it could cover the movement of the other two squads with its fire.

As a result of clear coordination the platoon constantly had the capability to move forward despite the "enemy's" counteraction. Coordination was also organized on other stages of the battle in the mountains in accordance with the same principle.

As the development of further events showed, coordination which was organized ahead of time and thoroughly between platoons and within them ensured success in the accomplishment of the mission. Despite the camouflage and deception measures which we undertook, the "enemy" discovered us nevertheless and tried to stop us on the ascent, greeting us with dense fire. The machinegunner, Private P. Dolzharov, quickly occupied a convenient position and opened accurate fire against targets which had been discovered. He was supported by Privates V. Varluyan, D. Asgoyan, and other soldiers. And meanwhile, Sergeant Guliyeu's squad climbed up a high, precipitous stone wall using the skills obtained on lessons in cliff climbing.

Of course, the rate of our advance was not very high. It was necessary to negotiate not only the precipitous cliff wall, but also stubborn "enemy" resistance. A possible slowing down of the rate was salvaged. Our company, including my platoon, advanced forward stop-stop though slowly. This also forced the "enemy" to withdraw from the line he occupied. He tried to stop us at another place. But the "enemy" had hardly begun to withdraw when we increased the rate of movement and pursued the withdrawing "enemy" relentlessly right up to emerging in the rear of his strong point. And then, by means of a swift attack we ensured the accomplishment of the assigned mission by the main body which attacked the "enemy" from the front.

The actions of the flanking detachment were decisive and skillful. And, first of all, because great attention was devoted to the organization of coordination at various stages of the battle, the significance of which it is difficult to overestimate in operations in the mountains. A positive role was also played by the socialist competition which was initiated among the men and by their striving for the successful accomplishment of the obligations assumed in honor of the XXII CPSU Congress.

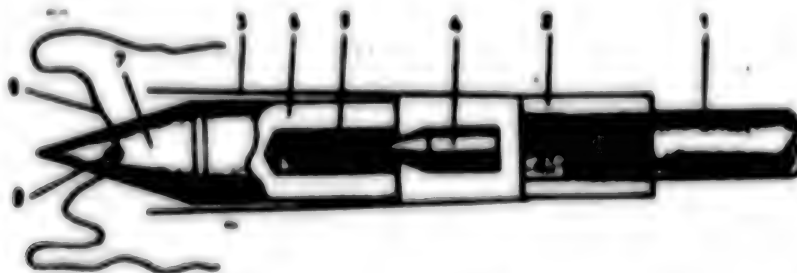
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### Device for Traversing Stream, Gorge

Moscow ZNAMENOSETS in Russian No 10, Oct 80 signed to press 22 Sep 80 p 12

[Article: "For Battle, For Victory"]

[Text] As a rule, when operating in mountains separated from the main body the personnel of small subunits are armed only with small arms which can be used to lay a rope crossing. The AKM assault rifle and a simple device proposed by officer V. Legkoby (see figure) permit fastening a capron cord on the other side of a gorge or river with a width of up to 100 meters. An insert (2) for blank firing from an assault rifle which is fastened on the barrel (1) is drilled out to a diameter of 9-11 mm. Three pieces of wire (3) with a diameter of 3 mm and up to 15 cm in length are welded to the insert uniformly over its perimeter. A dummy 23-mm artillery round (6) from which the tracer compound (5) has been removed is placed between the pieces. A wire ring with the capron cord tied to it (9) is inserted in a hole which has been drilled out (8) on the false ogive (7) of the dummy round ahead of time. In firing, the kinetic energy of a bullet (4) with a steel core is transmitted to the dummy round which pulls the cord behind it across the obstacle over a distance of up to 100-200 meters.



At the moment that the bullet hits the dummy round, the formation of metal sprays is possible. Therefore, the assault rifle should be rigidly fixed and should be fired remotely from cover using a small rope which goes to the trigger.

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### Defense of Heights Discussed

Moscow ZNAMENOSETS in Russian No 10, Oct 80 signed to press 22 Sep 80 pp 12-13

[Article: "Defense of an Entrance to a Gorge"]

[Text] "Each trip to the field is a new step in combat skill." The motorized riflemen of the subunit where Sergeant Z. Gvenetadze commands a squad are competing under this slogan in honor of the forthcoming 26th CPSU Congress.

...Executing a march through a gorge covertly, the motorized rifle subunit occupied a strong defense with the FEBA [forward edge of the battle area] along the northern slope of hills 2150 and 2200. The approach of the "enemy" main body was expected in approximately six or seven hours, and the appearance of his reconnaissance was expected earlier. There was no time to spare and therefore the motorized riflemen began to improve the platoon strong points without delay.

The squad leader, Sergeant Gvenetadze, received from the platoon leader the mission to defend a position on the crest of Hill 2200 (see diagram), on the right--the washout, on the left--the grey rock, with the goal of preventing the breakthrough of "enemy" tanks and infantry to the gorge. Field of fire: on the right--washout - Reference Point No 2, on the left--grey rock - Reference Point No 4.

Clarifying the mission, Sergeant Gvenetadze led the personnel to the position and organized observation on the spot, placing the machinegunner, Private R. Dzhaborov, on duty.

The squad leader now became occupied completely with the main questions: how to convert a position which was narrow along the front into an inaccessible fortress for the attacking "enemy" and how to employ skillfully in practice the knowledge and skills, experience, and initiative of his subordinates who had passed through a good school on the many lessons which preceded the exercise. It was necessary to think through, weigh, and envision everything; otherwise, when the battle breaks out the slightest omission may turn into defeat. And the motorized riflemen must not permit this. It was their highest honor to complete the jubilee year which was illuminated by the historic dates of the 110th anniversary of V. I. Lenin's birth and the 35th anniversary of the Great Patriotic War in an excellent manner and, on the firm base of what has been achieved, to move on to new goals in the socialist competition in commemoration of the 26th CPSU Congress.

Assigning specific combat missions to the personnel, Sergeant Gvenetadze paid special attention to the organization of a system of fire in the front and on the flanks which provides the possibility to conduct fire from all the squad's weapons, flanking and cross fire in front of the forward edge of the battle area and in the gaps with the adjacent units, for the conduct of an all-around defense, the creation of massed and concentrated fire on any direction, and the survivability of the weapons by using the protective and camouflage properties of the terrain. First, he selected a firing and alternate position for the BMP (infantry combat vehicle) as a powerful, mobile weapon in the struggle not only with "enemy" personnel and weapons, but also with tanks and other armored targets. And here, very opportunely, the washout which could serve as reliable cover and as a kind of embrasure in case the "enemy" entered the gorge fit in well.

The sergeant also decided to place the firing positions of the machinegunner and the grenade launcher on the right flank. From here it was more convenient to conduct aimed fire along the entire road to the very foot of the hill with the hill and to prevent entry into the gorge more reliably. In case of necessity, they could displace along a firing trench or communication trench to any other place freely. The sergeant also arranged the foxholes for the automatic riflemen in a well-thought out manner and indicated the sequence for camouflaging the positions. Engineering work of the semisunken type was accomplished using stones covered with a layer of soft dirt and sandbags. Explosives were used to dig out the rocky ground.

The motorized riflemen competed with each other for speed and quality in the accomplishment of the engineering work, manifesting wise initiative, keenness of wit, and using accumulated experience. First place was rightly awarded to the machinegunner, Private R. Dzhaborov. He inscribed a foxhole in a bend in the trench so successfully that it could not be distinguished from a close distance. With the aid of his comrades, a large stone was emplaced three meters from the foxhole in such a way

that it was level with the breastwork and did not interfere with the conduct of fire and, at the same time, served as reliable protection against bullets, fragments, and even shells (see figure). The machinegunner laid out a breastwork 30-40 centimeters high in the rear part of the foxhole using small and medium stones, and he filled the cracks with dirt. In case the "enemy" used an incendiary mixture, its landing in the foxhole from above along the slope, just as water during rain, was excluded.

Having issued his battle order for the defense of the position, Sergeant Ovetadze prepared a range card. Having information obtained from the platoon leader, he plotted on it the reference points common for all companies, sections for concentrated fire, and minefields.

"...--Reference Point No 6, right 200, 'enemy' BMP moving along the road," reported the duty machinegunner, Private R. Dzhabarov. Sergeant Ovetadze immediately reported the information on the approach of the single vehicle to the platoon leader. At the fork in the road (Reference Point No 5) the BMP stopped and its turret groped from side to side with its cannon.

Not noting anything suspicious, the patrol vehicle rushed forward toward the gorge along the road until it reached the mined sector.... The scouts who had abandoned the knocked-out vehicle were soon hit by Private Dzhabarov's accurate machinegun bursts.

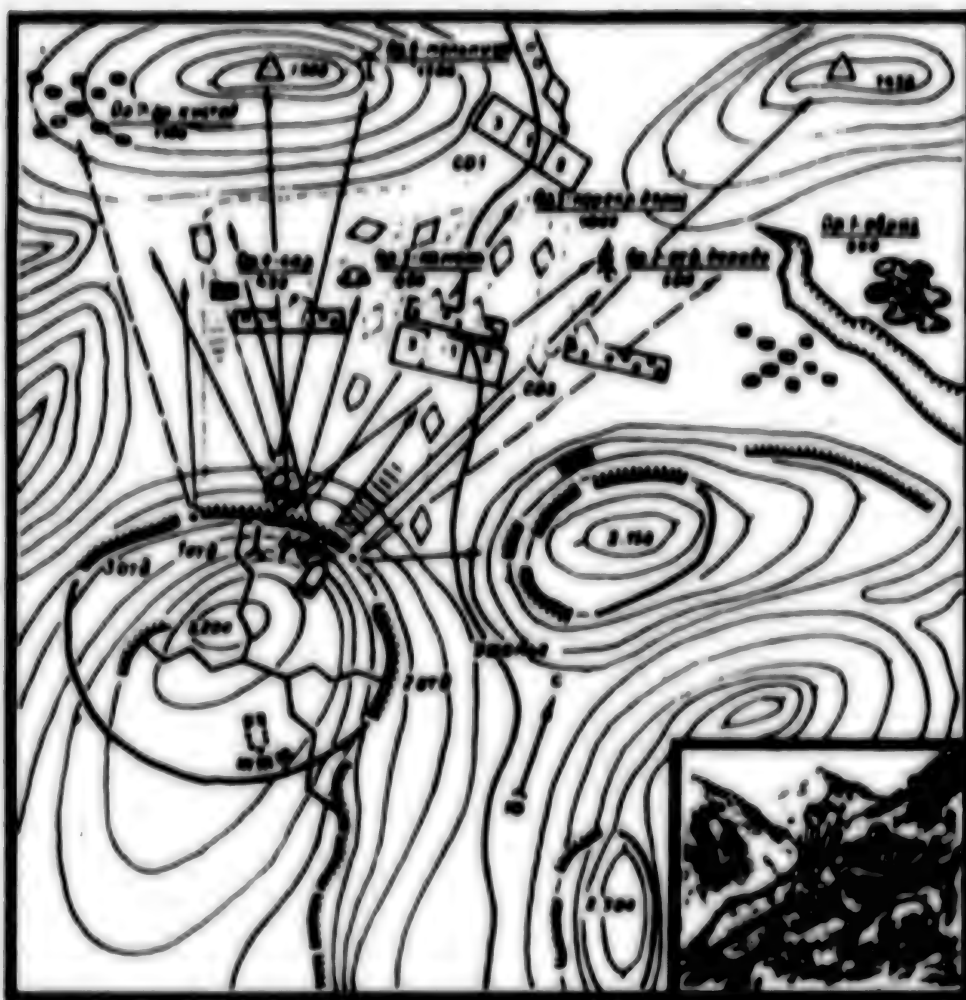
An "enemy" combat reconnaissance patrol consisting of three BMP's soon showed itself. It began to turn into an assault line formation at a high speed, opening random fire at the crests of the hills and trying to cause the responsive fire of the gorge's defenders. The motorized riflemen maintained their self-control. At the moment when the next vehicle blew up on a mine and the other two, in trying to bypass it on the right and left, presented their sides, two shots rang out. And the grenade launcher and the gunner operator did not expend ammunition in vain.

However, the battle had only begun. The main body which had approached began a powerful fire preparation on the hills adjacent to the gorge. (Its simulation was accomplished using the transmission of a tape recording of the bursts of shells, aerial bombs, and mortar rounds and by the detonation of smoke-puff charges within the disposition area of the strong point.) On the command of Sergeant Ovetadze, the squad's personnel occupied cover (a covered slit trench). Only the observer, Private S. Verdyan, remained in the foxhole continuing to accomplish the mission. With the appearance of the attacking "enemy," he immediately reported it to the squad leader. The motorized riflemen prepared to repel an attack.

The senior commander, in designating the "enemy's" actions beginning with the instant line, gradually brought them closer to the FEBR in such a way that the squad leaders worked out the successive destruction of the attackers first by the fire of the antitank guided missiles and guns of the BMP's and then by the fire of the machineguns, grenade launchers, and assault rifles.

Sergeant Ovetadze controlled the squad's fire, issuing brief commands, and concentrating the fire of available weapons or distributing them among individual targets. When one of the "enemy" tanks reached the barn and began to fire on the strong point from cover, the sergeant issued the command to the gunner-operator to destroy the cover with a fragmentation shell and then to destroy the tank.





Meanwhile, without considering large losses, the "enemy" continued to press hard. One of his tanks succeeded in breaking through to the entrance to the gorge. The squad leader ordered the gunner-operator to displace forward along the bottom of the washout and to destroy a dangerous target by fire from in place. Changing his firing position, the grenade launcher moved out to assist him. And it was extremely timely: a second tank which had broken through moved toward the gorge.

However, the forced measure led to a situation where the intensity of the squad's frontal fire weakened noticeably. Exploiting this, several "enemy" BMP's and tanks approached right up to the defenders, and the infantry dismounted. Sergeant Gvenetadze reported this to the senior commander, requesting permission to blow up a previously prepared engineering structure in order to cause a landslide.

And nevertheless, a portion of the "enemy" forces penetrated the defense. The motorized riflemen employed hand grenades and, by firing at point blank range, they continued to hold the occupied position firmly. The second and third squads came without delay from the unattacked sectors to assist the squad. By a decisive counterattack from two directions and in coordination with Sergeant Gvenetaize's squad, they destroyed the troops who had penetrated. The squad leader immediately adopted measures to restore the system of fire and the destroyed sectors of foxholes. As formerly, the entrance to the mountain gorge was firmly locked up by the stable and active defense.

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## Physical Training Methods Discussed

Moscow ZNAMENOSETS in Russian No 10, Oct 80 signed to press 22 Sep 80/pp 14-15

[Article by Sr Sgt V. Nefedov, leader of outstanding squad: "School of Soldierly Skill"]

[Text] Each of us is now living and learning with one thought: to prepare a personal gift for our party's 26th Congress--a high level of combat ability, firm ideological and physical tempering, and an increased ability to fight in the mountains and defeat a strong enemy.

And here today on a lesson on tactical training Privates M. Polyakov, V. Kholodkov, K. Shutis, and other soldiers of our squad received an excellent grade. As a part of a subunit, we accomplished a swift foot march over mountain trails and climbed precipitous cliffs to reach the "enemy's" rear and attack him together.

This success pleased us. One more step had been taken in the accomplishment of the obligations assumed in the competition in honor of the 26th CPSU Congress. The lesson also showed that daily drills on the mountain-sports training grounds was repaid a hundred-fold. Here we received good psychological and physical tempering and learned to conquer our fear of height.

Just what are our mountain-sports training grounds? There are three training sites on them. Each of them has three training points. At the first training site, we work out the procedures in climbing and descending inclined and vertical cliff walls and master the method of the three-points of support; we also learn to negotiate narrow crevasses and mountain rivers over rocks which protrude above the water.

A mountain obstacle course is the second training site. Here the skills which are necessary in the mountains are acquired and consolidated: coordination of movements and a sense of balance when negotiating obstacles on a rope or log. The technique of throwing a knife while moving is worked out simultaneously.

The third training site is a mountain tactical field. It includes a sector for hand-to-hand combat, a high-altitude zig-zag march, and descent from a tower on an inclined wire with the simultaneous conduct of fire.

The lesson on the mountain-sports training grounds lasts for 50 minutes. During this time, the squads of the company pass through all training points, that is, the soldiers drill for an average of five minutes at each of them.

During such a comparatively short time segment the participants manage to negotiate all obstacles two or three times. Such high intensity is attained through a well thought out procedure for accomplishing the exercises and clear organization which, in the end, provides a large return in training the men.

A rapid warm-up which includes a run, gymnastic exercises, and elements of hand-to-hand combat is conducted with the company personnel at the start of the lesson. This permits the soldiers to operate subsequently even from the first training site with maximum intensity since the muscles are properly warmed up.

So that the soldiers of the squad do not hamper each other at the training points, every minor detail has been thought out here. Thus, when negotiating cliff walls and a narrow crevasse on rocks the route of movement is indicated, and after throwing from the top of the cliff the training hand grenade returns automatically to the initial position.

The quality of conduct of the lessons depends to a great extent on the competent actions of the noncommissioned officers and an individual approach to the training of subordinates.

I will refer to my own experience. The best trained mountain fighter in the squad, in my opinion, is Private V. Kholodkov. He is not afraid of heights, storms precipitous cliffs boldly, and masters the procedures of hand-to-hand combat well. Private K. Shutis is also a match for him. I will say a little more about him.

At the start of the summer training period Private Shutis feared heights. At that time, we were working out the procedures for descent on an inclined rope with the simultaneous conduct of fire. Shutis climbed the 15-meter tower but did not begin the descent.

"And what if the rope breaks? I'll not succeed in doing anything," the soldier made excuses.

It was clear that he was covering his fear of heights, if one can say it this way, by the weakness of the rope. At that time, I did not force Private Shutis to descend. It was necessary to help him overcome the psychological barrier. But how?

Additional drills helped. On that same day after the lessons, I invited the soldier to the mountain-sports training grounds. First, I told him in detail how the exercise is accomplished, demonstrated each of its elements in practice, and ordered him to repeat it. For the subordinate to overcome his sense of fear more rapidly, I used an additional safeguard. We climbed the tower; Shutis threw a carabiner over the stretched rope but did not decide to take a step forward. I did not hurry him. I wanted him to overcome his fear himself. Private Shutis looked around. Seeing that I firmly held the end of the safety line, he pushed off from the tower and rushed downward. True, the rate of his descent was slow. I decreased it using the safety line. The second time, the soldier already operated more boldly. Then he performed the exercise independently. The psychological barrier was overcome in this way. On the next lessons, the soldier descended boldly from any height and, in so doing, conducted fire from his assault rifle confidently.

The matter was somewhat different with Private A. Dugin. Previously, the soldier went over all obstacles boldly. But suddenly, after a regular jump across a wire obstacle, he developed a sense of uncertainty. Dugin did not hold his body correctly and, falling on the ground, made a mistake. I pointed out his mistake to the subordinate and advised him how to eliminate it. But, as formerly, he was afraid of this obstacle. It was necessary to start from the beginning. First, Private Dugin jumped across a low obstacle, achieving the correct position of the body. And when he attained it, I began to increase the height gradually, bringing it to the necessary value. The soldier soon acquired his former confidence.

...Nothing broke the morning silence when the subunit climbed to the mountain plateau. We did not discover the "enemy" here but our path was blocked by wire and other obstacles. Private Bugin was among the first to negotiate them successfully.

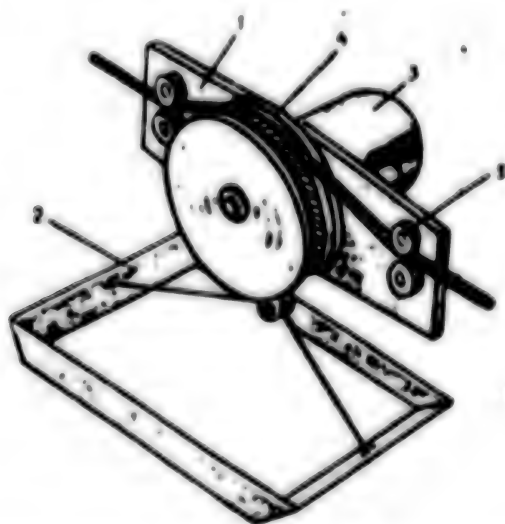
Lessons on the mountain-sports training grounds temper the soldiers' will, mold psychological stability, and develop physical strength. The men of the squad understand well that it is namely here that the foundations for their soldierly skill are laid. We are striving to strengthen the defense of our native country with a conscientious attitude toward our military duty and further improvement of mountain training. We see our main task in the period of preparation for the 26th CPSU Congress in this.

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#### Conveyor Device Described

Moscow ZNAMENOSETS in Russian No 10, Oct 80 signed to press 22 Sep 80 p 18

[Article: "For Battle, For Victory"]



A group of specialists developed a movable, portable cable device. Its advantage is that its authors rejected stationary complex devices which ensure the movement of the cable. The suspensive cable conveyor now being introduced in the district's units (see figure) has a steel cable with a diameter of 3 mm which is firmly fastened at the terminal points of the run and a self-propelled cargo carrier. This device consists of a housing (1) and cargo container (2). Located on the housing is a gasoline motor (3) on whose shaft is placed a block (4) with a V-shaped groove. Two pairs of guide rollers (5) having circular slots are located along the sides of the block. The cable, which is passed between the guide rollers, is wound around the block with one loop and keeps the cargo carrier freely suspended.



The motor is turned on to deliver people or cargo. The shaft's rotation is transmitted to the block which moves the container along the cable. The gasoline motor with a power of 0.8 hp can lift a weight of up to 200 kilograms uphill, and a motor with a power of 5 hp--up to 500 kilograms.

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## AIR DEFENSE FORCES

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Moscow VESTNIK PROTIVOVOZDUKHNOY OBOROY in Russian No 1, Jan 81 signed to press  
6 Jan 81 p 2

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## CIVIL DEFENSE

### TRAINING AND RELATED ACTIVITIES

#### In Murmansk

Moscow VOYENNYE ZNANIYA in Russian No 1, 1981 signed to press 8 Dec 80 pp 15-16

[Interview with Vladimir Ivanovich Sukhorukov, commander of a reconnaissance group of the Sevtekhrybprom Production-Technical Association by D. Solov'yev in Murmansk: "For the Honor of the Collective"]

[Text] You ask how the competitions went? Well, our reconnaissance group took first place in Oktyabr'skiy Rayon. But everything in its place. We experienced no particular worries as we were preparing. We were given three days for practices and, as chief of staff Anatoliy Kuz'mich Kirilov said, we used part of the time for theoretical discussions. We had to check ourselves.

The first day went for the equipment. We took three topics of the program as the basis in checking knowledge of theory. Something of the sort of the television broadcast "What? When? Where?" resulted. I would read a question and the rest would interrupt each other in suggesting answers. But still the activeness was not identical. Our group consists of sections formed on the basis of different production subunits. At first some would be silent in attempting to understand whether or not they had something to say. Then they adapted and felt themselves to be a collective where everyone is equal. Practice in working with instruments went on for the entire third day.

We went to a rayonwide formation in full gear. Several columns already were standing in the field. The varicolored parade uniform of the medical teams created a ceremonial holiday mood. Forming the group up next to the other reconnaissance formations, I thought: "We look so painfully dull: cotton coveralls, rubber boots, various caps..."

While listening to the send-off by rayon heads, I went over in my mind tales of Army wartime scouts. It was rare that some veterans did not mention them: "Our reconnaissance reported," "The scouts brought in a prisoner for interrogation prior to the attack," or "The scouts cut the enemy communications lines." These recollections somehow warmed my heart and I sensed pride in the awareness of belonging to people of a heroic profession.



I tried to imagine the situation in which we would have to operate. Demolished houses, production buildings, fire and smoke--no, I couldn't actually imagine anything... Could I count on everyone in the group? Who would help out at a difficult moment? Did everyone have sufficient skill, composure and the ability to mobilize when it would be necessary to make decisions in unusual situations?

The chief judge told about the procedure of the competitions. It was impossible to remember everything. I tried to recall the name of the commander of the fourth section, the one who was "not one of ours." He appeared to be a sociable lad, but how the chemical specialist from his section fussed. Yes, Konkin was his name. He knew the instrument: He dropped such scientific terms that it surprised the entire group. The judge called the commanders over to draw lots. I got the second number. I could consider myself lucky. Someone else had to beat out the path, and we could follow: There would be time to settle down and take account of the others' mistakes.

The sky was threatening. A gusty wind was blowing. We picked up the step in order to warm up. Many of us had engaged in sports and knew well how to get in shape.

We halted and took a breather. The nervousness passed, although all the time we were looking at the judge. His imperturbable face put us on guard.

I know my city, having climbed all the cliffs in the outskirts as a young lad, and so I took the group to the initial point without mistakes. I noted to myself that I had passed the first test as a commander. I reported to the judge the group's readiness to participate in the competition. This phase began in a somewhat routine manner: The judge counted the people, protective masks, instruments and other gear and entered the results on a special sheet, one copy of which he handed to me. I looked over the sheet: Grade--"four"; penalty points--two; remarks--no L-1.

"But there was no order to put on the L-1," I said, already beginning to become nervous, although I realized that this in itself was harmful.

The judge questioned everyone, finding out who was assigned to which CD position. It appeared everything was in order here: A five appeared in the column "Personnel's Knowledge of Their Duties" and there were no penalty points.

"Chemical warfare scouts, five paces forward!" commanded the judge and immediately went up to Valeriy Konkin. "That's fine," I thought. "We're just lucky, for Valeriy knows the VPKhR [troop chemical reconnaissance instrument] like the back of his hand." He was asked to place the instrument in readiness. The lock clicked and the lid opened. "Where do you begin in determining sarin and soman in the air?" asked the judge. But for some reason Valeriy was silent.

The judge turned to another chemical specialist, Anatoliy Kuznetsov. For some reason, he had put on sunglasses. The lad obviously likes to show off. Kuznetsov looked at Konkin. I felt that he faltered as if he decided: "Well, since that expert failed, that's all the more reason why I can." He stood and was silent. Four penalty points and a grade of "three" appeared in the judge's checklist.

Valentin Stoletov helped the group out. There was confidence in his words and movements. Anatoliy Sotnikov also answered and demonstrated actions with the DP-5 instrument without a hitch. It seemed to me that the judge did not question the

other radiological monitors very naggingly. Taking the judge's checklist from my hand, he entered two figures with some kind of special satisfaction: a "five" for a grade and a "zero" for the penalty points.

The judge handed out the azimuth card and briefly explained the mission. Everything was clear to me. I noted in passing how the small lads poked about, carried away by the competition of scouts and medical teams and how the clouds were floating by, barely touching the tops of the cliffs. I assigned the group the mission for reconnaissance of antiradiation shelters. I ended as follows:

"Attention, order for all! Take out the AI-2 first aid kit! Take the rose-colored vial from slot No 4! Take six tablets each and drink water! Put on protective masks! Put on gloves! In the direction indicated, forward!"

Hardly had we entered the "center" when the judge tugged at my sleeve:

"I'm ready to give you a 'six' for assignment of mission, but let it be a 'five plus'," he said, casting a sly glance at me, and he demanded the judge's checklist.

I received narrative problems one after the other: "PRU [radiation shelter] demolished," "Twenty victims, varying degrees of injuries."

"Smirnov, communications!" I said to the communications section commander. I ran over to the radiological monitors: Glancing at the instruments, they indicated on their fingers the radiation level--10 roentgens per hour. I reported the first data to the CP.

I received a new mission. Again I didn't forget about the AI-2 first aid kit, this time one tablet each from such-and-such a vial. I determined the location of the chemical center from the sketch map. I shouted with all my might: "Gas!" The judge ordered everyone to enter the gas tent. The chemical specialists did not lose their heads: They placed filters on the instrument pump attachments. Everything was according to the rules.

Narratives poured out as from a horn of plenty: "V-gases," "Sarin," "Forty sarin victims." There are inscriptions on the rocks: "Individual conflagrations," "A barn is burning," "Garbage has ignited," "Radiation level 20 roentgens per hour." Section commander Smirnov is a good lad: Communications are functioning faultlessly. He skillfully writes down the situation from the sketch map and at times he himself passes on reports. Everything is going as it should.

We stand with our faces to the wind, brushing coveralls with branches and wiping protective masks and gloves with watersoaked rags. We remove the protective masks, then the gloves, but the judge has no thought of giving us a breather.

"Nuclear flash to the left! Flash to the front!" sound the commands. Then we are overcome by misfortune: Someone, driver Yermakov I believe, laid down with his head in the wrong direction and not everyone used folds of the terrain for protection. Penalty points appeared in the next judge's checklist. I consoled myself with the fact that there were "fives" for knowledge of warning signals and performance of norm No 1. Kuznetsov again had put on dark glasses prior to this. This was an example for the rest, but no one followed him, and I had second thoughts much later.

In an actual situation the scouts might be deprived of sight for a long time. Now the judge had a legal right to punish us with penalty points.

It appeared the lads got tired or perhaps they had relaxed on seeing that everything was going normally. How could they be cheered up? I ran from section to section and ordered them to remain just as composed.

We slowly followed the judge, all eyes looking to the sides. Rain began and visibility worsened. We almost overlooked a chalk inscription somewhere near the base of the cliff: "Bacteriological center." Thanks go to Guriy Mikhaylovich Semenov. He noticed it and gave the "Chemical Alert" signal. Suddenly four persons rose up before us as if out of the ground. One of them had a medical bag with a red cross over his shoulder. "We are an epidemiological reconnaissance group," they stated. "Help us transmit a report to the CP." They gave the text, but something was wrong with the radio. But Smirnov gave a different call sign as if nothing had happened. Good lad. He had shifted to an alternate frequency in time.

The judge again issued narrative problems: "Twenty victims of unidentified infection," "Radiation level 15 roentgens per hour." But it appeared we were sufficiently experienced. I plotted the situation on the sketch, noting what we had seen and heard. The scouts set up authorized markers.

But the chief tests were in the final phase. I realized from the assignment card that it remained for us to reconnoiter a center of nuclear contamination. We were proceeding in sections five paces from each other. We looked over the inscriptions: "0.05 roentgens per hour," "0.3 roentgens per hour." It was difficult to make them out as the rain had washed them out rather thoroughly. Smirnov tried to establish communications with the chief judge on the move. Truboyevskiy, fourth section commander, raised his hand: Stop, something's wrong. He ran up to Smirnov: "Don't hurry, we're in a safe zone."

We went further. As soon as we saw the marking "0.5 roentgens per hour," Truboyevskiy gave a sign: "Report our entry into the center of nuclear contamination."

The figures denoting radiation levels kept increasing. At a turn we saw: "60 roentgens per hour." Truboyevskiy again raised his hand. What was this to mean? We looked for detours. Now and then the radiological monitors switched on their instruments. The judge was silent as the grave. We discovered inscriptions: "PRU demolished. 50 victims" and "Heavy conflagrations." I plotted a proposed path on the sketch map for carrying and leading out the victims. Now and then the judge would look at my notes.

We returned to the initial point. I had no more strength to give commands while wearing the protective mask, but thank heavens the lads understood me without a word. They formed up and performed gas and radioactive decontamination of clothing, instruments and protective masks and personal cleansing of hands, necks and faces.

I leafed through the judges' checklists and looked at the grades: 4.4 in the first phase, 4.6 in the second and an even 4 in the third. I began making out the sketch-reports...

You ask how I and my comrades felt during the competition? We didn't want to fall on our faces. We wanted to justify the trust of our association's management and be true to the traditions of our grand collective.

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### Night Reconnaissance Training

Moscow VOYENNYE ZNANIYA in Russian No 1, 1981 signed to press 8 Dec 80 pp 16-17

[Article by B. Rylunov: "Under Conditions of Limited Visibility"]

[Text] Special tactical problems at night and under other conditions of limited visibility are held only with personnel of a nonmilitarized formation which is well trained in daylight operations and has mastered its specialty and practical skills to perfection. Let us examine certain aspects of preparations for a night problem with radiation and chemical reconnaissance groups.

The following detail draws attention to itself above all. If, let's say, a special tactical problem is held during the day, such as with a decontamination team, the director can easily get by without umpires. But this is almost impossible in training a radiation and chemical reconnaissance group at night, for it acts in sections spread apart from each other over considerable distances across a front (particularly in reconnoitering routes, separate axes and roads). It is best for the director of such a problem (the CD chief of staff or chief of an installation's PR i PKhZ [radiation and chemical defense] service) to train one or two umpires to assist him.

The effectiveness of night training also depends largely on the director's ability to give the personnel a sharp feeling for the complex radiation and chemical situation, which is achieved through the diversity of narrative problems, simulations and other methods techniques.

The director studies appropriate training methods literature, aids and manuals relating to night actions and selects a place for the class (a route, training compound or suitable terrain sector). The problem plan is best made out graphically on a map or installation plan with a legend in the margins. The tactical situation is plotted with an indication of the boundaries of centers of destruction and of zones of radioactive and chemical contamination. The legend indicates the topic, training objectives, training questions, sequence for working them, and logistics. It is convenient for the director to use such a plan. The necessary texts of radio messages (narrative problems) and radio frequency data for operating radios under established procedures also are drawn up.

In preparing for the problem it is important to consider the features of operations under conditions of limited visibility, chiefly the difficulties in orientation on the terrain, since the coloring and outlines of objects change sharply in the darkness. Local objects which can be easily made out at night are chosen ahead of time as reference points. The locations and boundaries of contaminated sectors or zones are indicated in reports and messages based on these reference points. The distances to them and the depth of the sectors or zones themselves can be determined from the vehicle's speedometer. Their boundaries are marked under nighttime



conditions with authorized nets of boundary markers with illumination and by luminous markers made from materials at hand. Vehicles must have black-out lights. Speed is reduced to 15-20 km/hr.

It should be noted that the people's fatigue and psychological stress increases at night and they are hampered by working in protective masks and coveralls and in working with radiation and chemical reconnaissance instruments.

Scouts are provided with handheld flashlights. They have to know sound and light signals.

Prolonged stagnation of OV [toxic chemical agents] in hollows, ravines, forest tracts, basements and other places is possible under night conditions. This requires scouts to provide a precise determination of the type and concentration of toxic chemical agents.

The problem director and umpires prepare for themselves diagrams and tables for building up the radiation and chemical situation, indicating the points on the terrain, approximate time, nature of the contamination, radiation levels, OV type and expected trainee actions.

Group or section personnel are prepared ahead of time for night actions. During the allocated hours they study features of orientation on the terrain, reinforce skills in working with the instruments and practice norms of putting on individual protective gear. It is important to check the serviceability of instruments, the fit of protective gear for skin and respiratory organs, and readiness of decontamination facilities. Special attention must be given to setting up spare detectors and power sources and to the technical inspection and charge of dosimeters.

Such scrupulous preparation is extremely necessary, for at night the director cannot always personally monitor the trainees' actions or take note of and help them remedy their mistakes.

The problem usually begins with a check of readiness for the field exercise, the completeness and technical serviceability of instruments and protective gear, and a knowledge of features of driving vehicles in the darkness, of prearranged signals and so on. After remedying the deficiencies discovered, the director announces the problem topic and objectives, informs the personnel of the tactical situation and, in the role of senior commander, assigns the group commander a mission to make a march to the initial area.

During the problem special attention must be given to the technique with which certain operations are performed with the radiation and chemical reconnaissance instruments at night and to the mistakes made by the scouts in the process. For example, in working with the DP-5 instrument, mistakes are made because of its improper positioning in measuring radiation levels, readings sometimes are made without consideration of the band factor and the gamma background of the terrain is not always considered when measuring an object's degree of contamination.

On noticing a mistake, the director corrects the radiological monitor and points out that when measuring radiation levels on the terrain the DP-5 instrument must be on the chest at a height of approximately 70-100 cm from the surface of the ground and the probe unit's screen should be in the "G" position.

Persons often do not take account of the band factor when reading radiation levels from the microampere meter scale because of poor visibility of the switch position. To avoid this, in addition to the microampere meter scale illumination, one must use a flashlight to check the position of the band switch and the corresponding value of the factor multiplied by 10, 100 and so on.

Degree of contamination of an object or piece of equipment (vehicle, bulldozer and so on) is monitored in such a manner that the distance between the instrument probe unit and object being checked is 1-1.5 cm. The screen of the probe unit must be in the "G" position. The instrument's probe unit must not come in contact with the object's surface during the measurement. In this instance further instrument readings will be incorrect. Illumination of the surface of the object to be checked also is required each time prior to measurement.

"But prior to beginning to monitor contamination," remarked the director, "determine the gamma background of the terrain, i.e., the dose rate of the gamma radiation."

The gamma background is measured in the same location where the degree of contamination is monitored or at a distance no less than 15-20 m from the contaminated object. Locations of the object's maximum contamination are determined from the greatest frequency of clicks in the headphones or according to the maximum deflection of the microampere meter's needle every 45-60 seconds. To determine the degree of radioactive contamination, subtract the amount of the gamma background divided by the K factor (characterizing the screening effect of the object being checked) from the amount of the object's measured dose rate. This factor equals 1.2 for people and agricultural animals, 1.5 for motor transport and 1 for medical gear, food containers and messhall and bakery equipment.

We will give the following example as an explanation. In monitoring the degree of contamination a radiological monitor determines that the measured dose rate of a vehicle ( $R_{\text{meas}}$ ) was 600 milliroentgens per hour and the gamma background (RF) was 300 milliroentgens per hour. The degree of radioactive contamination of the object ( $R_{\text{rel}}$ )—the vehicle—equals:  $R_{\text{rel}} = R_{\text{meas}} - \frac{RF}{K} = 600 - \frac{300}{1.5} = 400$  milliroentgens per hour.

The value for the degree of radioactive contamination obtained by this method is compared with the permissible value. If the measured dose rate on the surface of the equipment or property is equal to or less than the gamma background, then the degree of radioactive contamination of that object is not determined.

When scouts are determining the OV in the air and on the terrain, the problem director focuses the chemical warfare scouts' attention on the following mistakes in working with the VPKhR [military chemical reconnaissance instrument]: The sequence of determining OV in the air using detector tubes was not followed; smoke filters and protective caps were improperly used in determining OV in the soil (on the terrain). The problem director demonstrates practical work with this instrument in the following sequence: First contaminated air is detected by the tubes with a red ring and red dot, then by the tube with three green rings, and finally by the tube with a yellow ring.

The protective cap and smoke filter are used to determine OV in the soil. The detector tube is inserted in the pump head. A nozzle is screwed onto the pump and the protective cap placed on the cone of the nozzle. The cone is filled with soil and covered with the smoke filter, which is fastened by a clamp ring. The necessary number of pumps are made (the pump being held head-down). After air is pumped through, the clamp ring is removed and the smoke filter, sample and cap are also removed. The nozzle is unscrewed and placed in the instrument and the detector tube is removed from the pump head. It is illuminated and then the OV type determined in conformity with instructions on the cassette label. OV in loose material is determined in the very same manner.

In case of incorrect or imprecise performance of work techniques with the instruments, the director and umpires require trainees to repeat them. The situation is developed using narrative problems and the director ensures that the problem's training objectives are worked to the full extent.

We will note in conclusion that under present-day conditions personnel of reconnaissance formations need detailed professional knowledge, firm skills of night operations, and readiness to remain in protective gear for a prolonged period and to be able to reconnoiter vast zones of contamination.

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#### Reconnaissance Instrument Training

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[Article by Col S. Titav: "Be Able to Work with Instruments"]

[Text] Two classes are set aside for studying instruments for radiation and chemical reconnaissance and for radiation monitoring. It is recommended that the first practical class study the purpose, design and preparation for work of the DP-5A, DP-5B and DP-5V instruments, the DP-12V individual dosimetric kits and the military chemical reconnaissance instrument (VPKhR), as well as the procedure for charging dosimeters and taking readings. The class can be held in the training compound.

It is advisable to divide the training group in the second class into two subgroups of 10-12 persons so that each trainee can use the instruments.

The instructor draws up a lesson plan indicating the topic and objective of the class and the time needed to work training problems. The lesson plan also reflects logistical support and work methodology. The day before, the instructor appoints one or two assistants from among the best trained students, briefs them, and checks the serviceability and completeness of instruments to be studied, the fit and readiness for issue of individual protective gear, and the presence of means for simulation of radioactive and chemical contamination. The KKT-1 or KKT-2 monitor tube sets can be used to simulate the readings of the VPKhR detector tubes. It is also advisable to have operating models or block diagrams of the design of dosimetric instruments and of the operation of the ionization chamber and gas discharge counter tube (see inside back cover) [not reproduced].

In presenting the first training problem, the instructor explains that it is impossible to determine correctly the radiation levels, people's radiation exposure and so on without dosimetric instruments. Then he explains the purpose, specifications, lay-out and design features of the DP-5B roentgen meter.

It should be emphasized that the DP-5B and DP-5V instruments are dissimilar not only in external appearance, but also in performance data, design and preparation for operation. For example, the DP-5V measures radiation levels in the temperature range from  $-50^{\circ}$  to  $+50^{\circ}\text{C}$  and relative humidity of  $65 \pm 15$  percent, and the DP-5B does this from  $-40^{\circ}$  to  $+50^{\circ}\text{C}$  with the very same relative humidity. The DP-5V is heavier than its predecessor by 400 grams. The DP-5B has no "reverse" for the microampere meter needle in the bands  $\times 10$ ,  $\times 1$  and  $\times 0.1$  with overload exposures by radiation levels up to 1 roentgen per hour, while the permissible overload exposure of the DP-5V in these bands was increased to 50 roentgens per hour by replacing the STS-5 counter with the SBM-20 counter.

The role of the mode adjustment potentiometer in the DP-5V is performed by a field transistor included in the circuit of the voltage transformer transistor base. The probe unit has a pivoted screen which can be fixed in position "B," "C" and "K" instead of the "B" and "C" for the DP-5B. In the "K" (check) position, a B-8 type radioactive control source is placed opposite the window. It is fastened in a recess on the screen of the instrument's probe unit and not on the top of the case as for the DP-5B.

In preparing the DP-5V for operation, the switch lever is placed in the mode set position and the instrument's needle should come to rest in the mode sector.

The trainees' attention also should be focused on the most characteristic mistakes made in working with the DP-5B: improper setting of the instrument's mode of operation, incorrect positioning of the probe unit when measuring the degree of objects' radioactive contamination and so on.

After ensuring that the material he presented has been assimilated by the training group, the instructor demonstrates preparation of the DP-5B for operation and the procedure for measuring radiation levels. He explains that before beginning to monitor contamination, the gamma background of the terrain on which measurements will be made is taken into account without fail, and a polyethylene cover is placed on the probe unit when measuring the contamination of liquid and free-flowing substances. The trainees repeat their instructor's actions.

Completing practice on techniques of working with the DP-5B, the instructor shifts to study of the VPKhR. He tells about the purpose and performance characteristics of the instrument and shows its design. He also directs the trainees' attention here to the most typical mistakes in working with the instrument: the improper sequence in opening the ampules and pumping air through the detector tubes; placing the marked end of the detector tube in the recess of the pump head, and so on.

In preparing the VPKhR for operation, a check is made of the presence and serviceability of all objects and the arrangement of cassettes with detector tubes.

In addition, explains the instructor, one must firmly know the properties of the detector tubes, since their contents are colored not only by OV, but also by other



substances in the air. For example, neutral and toxic smokes in large quantities mask the color of the tube contents. For this reason, when operating in a cloud of smoke use the cap with the smoke filter without fail. Tube sensitivity drops in low temperatures. The solution in the ampules freezes for the tubes with the red ring and dot. A heater is used in winter to avoid these phenomena.

In demonstrating operating techniques with the VPKhR, the instructor emphasizes the importance of identifying the nerve gas in dangerous and safe concentrations and in low temperatures. He also speaks about features of working with the instrument at night. Then group personnel practice techniques of determining OV in the air, on the terrain, on equipment, in soil and in free-flowing materials.

After this the instructor familiarizes trainees with the DP-22V individual dosimeter sets and explains that the DKP-50A dosimeters in them are intended for measuring gamma radiation doses in the range from 2 to 50 roentgens. The dosimeter design requires particularly careful handling and the instructor briefly covers its lay-out. Then he shows how to charge the dosimeters using the ZD-5, focusing attention on the fact that a check should show the line in the DKP-50A eyepiece situated vertically on the scale, with its image on 0. Under normal conditions the self-discharge of the dosimeter does not exceed two graduation marks in a day on the scale.

If the ID-1 troop dosimeters and ID-11 individual dosimeters are present, the instructor tells about their purpose, provides their performance characteristics and notes that, in contrast to the DKP-50A, these meters register gamma and neutron radiation (penetrating radiation).

Trainees then try charging (recharging) the dosimeters using the ZD-5 themselves.

At the end of the class the instructor shows the students where and how to carry the dosimeter and the procedure for determining the amount of exposure in the dosimeter eyepiece.

The second class is held with subgroup personnel at two stations. At the first the instructor practices with the students techniques of measuring radiation levels and the degree of radioactive contamination of objects using the DP-5 instrument, while at the second station his assistant practices techniques of detecting OV using the VPKhR.

Forming up group personnel, the instructor orders them to put on skin protective gear and clocks the time for norm fulfillment. Trainees disperse to their areas. Each one prepares the instrument for operation and checks its working capacity on his own. Then comes the command to begin practical measurement of radiation levels. Moving over the terrain, trainees observe the microampere meter readings and place the band switch in the positions "200," "x1000," "x100" and so on in succession until the needle deflects within limits of the microampere meter scale.

The instructor issues narrative problems: the microampere meter needle deflected to the figure 50; band switch is in position "200"; microampere meter needle deflected to the figure 3; band switch in position "x1000." After each narrative problem the instructor requests a report on measurement results. If the trainees act incorrectly he explains their mistakes and sees that they are remedied.

Then comes the command to measure the degree of radioactive contamination of objects. Trainees prepare the instruments for operation and measure the gamma background of radiation, for which the probe unit screen is placed in the "G" position, placed at arm's length with supports facing downward at a height of 0.7-1 m from the ground and take the microampere meter readings. The instructor issues a narrative: "Microampere meter needle has deflected to the figure 2. Band switch is in position 'x10'." The trainees report: "Gamma background equals 20 milliroentgens per hour."

One of them approaches an object, such as a vehicle, and also places the probe unit screen in the position "G," but holds it at a distance of 1-1.5 m from the object's surface and checks the contamination. At this time the instructor issues a narrative problem: "Microampere meter needle has deflected to the figure 2.5. Band switch is in position 'x100'." The trainees report the degree of radioactive contamination of the vehicle (in this instance 237 milliroentgens per hour;  $250 - \frac{20}{1.5}$  (where 1.5 is the factor characterizing the screening effect of the object being examined), and evaluate the figure obtained. The instructor monitors the procedures for conducting measurements and the correctness with which techniques are performed, and he gives the trainees practice on other objects.

During this same time the instructor's assistant at the second station gives instructions to prepare the VPKhR for operation. Trainees check the presence of all objects in the instrument, see that they are serviceable and place the cassettes with detector tubes in the prescribed order. They remove the polyethylene cover from the smoke filters. Then comes the command to determine the presence of OV in the air. Trainees check the air contamination. The assistant instructor monitors the correctness with which tubes are uncovered, ampules broken, tubes placed in the pump and the air pumped through. He issues a narrative problem: "Contents of the test tube changed color to red." Trainees report results of their determination: "Enemy has employed nerve gas." In working with the KKT-1 or KKT-2 the trainees compare the color formed in the detector tube filler with that shown on the cassette label and report observation results. In response to the command to determine the presence of OV in smoke, trainees must use the cap with the smoke filter. A check must be made to ensure that they install the filter with the filtering material, and not the capron, on top.

Then the degree of equipment contamination is determined. Trainees take the requisite detector tube, open it and place it in the pump head. They screw the nozzle onto the pump, leaving the clamp ring off, and place the protective cap on the nozzle cone. They place the nozzle on the surface to be examined so that the cone covers the sector with the most clearly defined signs of contamination and pump air through the detector tube with the necessary number of pumps. Then they remove the nozzle, discard the cap, retract the nozzle into the instrument and remove the detector tube from the pump head. At this time a narrative problem is issued: "Filler of detector tube with yellow ring changed color to red." Trainees report: "Equipment contaminated with OV of the mustard gas type."

After completion of work with the VPKhR to determine the contamination of free-flowing materials, the assistant instructor points out the mistakes detected, sees that they are remedied and issues a narrative problem: "Filler of test tube with red ring and dot changed color to red." Trainees report: "Sample contaminated with nerve gas."

After ensuring that all identifications of OV using the VPKhR have been performed, the assistant instructor assembles the subgroup and indicates the basic deficiencies revealed in identifying enemy OV. Then the subgroups change places.

After working all training problems the instructor assembles the trainees, checks the presence of supplies and performs a brief class critique.

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#### Medical Aid Team Training

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[Article by P. Kurtsev, chief of medical defense and medical sanitation operations administration of Executive Committee of Union of Societies of the Red Cross and Red Crescent of the USSR: "New Statute Introduced"]

[Text] In conformity with instructions of the USSR CU chief of staff, the deputy minister of health of the USSR and the deputy chairman of the executive committee of the SOKK i KP SSSR [Union of Societies of the Red Cross and Red Crescent of the USSR], a new Statute on Competitions of Medical Teams and Medical Posts becomes effective on 1 January 1981.

Such competitions represent one of the effective forms of medical team training and are winning increasing popularity with each passing year. The new Statute is intended to contribute to a further improvement in competition organization and to more extensive knowledge and skills of the personnel of participating formations.

Much work preceded the implementation of this important document. Its draft was discussed widely in the central, republic, oblast and kray committees of the Societies of the Red Cross and Red Crescent, in corresponding civil defense staffs and in public health entities. The amendments and suggestions made were considered in the final version.

Above all, in contrast to the previous statute, the new Statute extends not only to medical teams, but to medical posts as well. It contains a list of obligatory documents needed in conducting competitions. A new, simplified format for judges' checklists has been developed and the procedure for using them is indicated. Publication of judges' checklists has been made the responsibility of central committees of the Societies of the Red Cross and Red Crescent of union republics, who must provide judging commissions with them. It must be assumed that this measure will allow achieving a unity of requirements placed on competitions of all ranks, that it will free local committees of the OKE [Society of the Red Cross] and OKP [Society of the Red Crescent] of extra bother and, of no small importance, it will ensure a saving of paper and time.

The role of political indoctrination work is a major one during preparations for and conduct of competitions. Many years of experience indicate that a spirit of genuine friendship and comradeship reigns in those teams where the commander and political instructor perform this work purposefully and continuously, discipline and efficiency are strictly observed in competitions and high results are achieved in political indoctrination work. An entire section is devoted to this work in the new Statute where its tasks are defined and forms and methods demonstrated.

Concerning the features of work in competition phases, it should be noted that the symptoms of injuries in a center of nuclear contamination have been expanded somewhat and symptoms have been drawn up for a center of chemical contamination.

The sight of a bleeding wound, an extensive burn or other injury usually generates emotions in an untrained person which do not contribute to prompt and skilled actions. A difficult tactical and medical situation created in competitions, especially skilled simulation, helps develop the necessary skills and high psychological qualities. The effect of its use can in no way be compared with the use of simulation cards.

For this reason the new Statute gives attention to the simulation of wounds and injuries and to the training of special simulation groups from among activists of the Societies of the Red Cross and Red Crescent and from among medical workers. This task is set for the committees of the OKK and OKP and for health entities. It was dictated by concern for a further increase in the readiness of medical team personnel.

The new Statute reduces the number of competition phases to five. Drill training has been excluded, since it is not covered by the training program for medical teams and medical posts.

The first phase now checks the outfitting of medical teams and medical posts and their ability to use authorized gear and improvised means. In giving the overall grade, however, it is recommended that consideration be made only for the penalty points received for the inability to use the gear. Penalty points for deficiencies in equipment are considered separately and made known to the heads of installations and establishments during critiques, inasmuch as they attest more to incomplete work by these appointed officials than to mistakes by the medical team members.

In the second phase of competitions the medical teams and posts demonstrate their capability to act in a center of nuclear destruction. They must locate victims, perform preliminary sorting, give them first aid, then take them a distance of 30-35 m from the center of the work area (previously it was up to 50 m) and correctly load them aboard transportation.

A normative time has been established for the work of medical teams and posts in various centers of destruction. For example, a medical team is given 35 minutes for giving first aid to 20 victims in a center of nuclear destruction and for loading ten of them on transport. In 30 minutes a medical post has to give first aid to four victims (one ambulatory and three stretcher patients), and load two aboard transport. Competitors receive one penalty point for each minute in excess. If a team or post completes work ahead of schedule, the penalty points imposed for mistakes are not removed.

Only one medical team section is checked at the decontamination and partial personal cleansing area, while a medical post is tested at full strength. Actions at this area are included in the program of the second phase of competitions.

The third phase consists of the work of medical teams and posts in a center of chemical contamination. A medical team is given 15 minutes to give first aid to 15 victims and take them a distance of 25-30 m away. In 10 minutes a medical post



has to give aid to three victims and take them out of the center. One section of a team and the full-strength medical post is checked at the partial gas decontamination and partial personal cleansing area.

In the fourth phase the medical teams and posts operate in a center of infectious disease. The new Statute eliminates theoretical questioning here and recommends only practical work: taking samples of the external environment, food and water; rounds of apartments; preparation of disinfectant solutions; and final disinfection. Work time is not considered.

The fifth and final phase is provided for competitions from rayon and above. In this phase the medical team members demonstrate techniques of caring for victims and patients in a hospital department.

A combining of the second and third phases is permitted in installation competitions. An assignment to give first aid to victims with traumas and injuries from toxic or virulent substances may be given in the same center.

As already stated, the new Statute has no drill training phase. It is recommended that drill training be considered during formations at the opening and closing of competitions and the grade (which is not included in the overall total of penalty points) be given during critiques. There was no change in the procedure for conducting a theoretical contest or a review of the wall newspaper and amateur artistic work.

The new Statute takes account of the training level reached by medical formations and of their capabilities. Its requirements have a clearly expressed practical direction corresponding to the trends which now predominate in training civil defense formations.

These briefly are the features of the new Statute. Committees of the Societies of the Red Cross and Red Crescent already have received several thousand copies. The remaining 400,000 copies will be sent to them this year.

The task now is not only for committees of the Societies but CD staffs and health entities as well to study requirements of the Statute and be guided by it in their subsequent work. Competitions of medical teams and posts must be conducted under the new Statute during this training year.

Competitions, which rightfully are considered a combat review of medical teams and posts and a strict test of their capability to operate in a difficult situation, require the most careful attention of the organizers. There is no need to prove here the importance of this most difficult and responsible phase in training medical formations, as it is obvious even without this. But it is necessary to give another reminder about the need for strict observance of the procedure for preparing and holding competitions, avoidance of conditionalities and oversimplifications, and the inadmissibility of mistakes in planning.

I would like to dwell in more detail on the latter point. The Statute on Competitions of Medical Teams and Medical Posts contains a precise, concrete list of documents needed for successful conduct of competitions. But a preliminary "trial" of the Statute in the draft stage indicated that CD staffs, health entities and

committees of the Societies in a number of places do not devote proper attention to this matter. The competition program, political indoctrination work plans, outline of phases, sample schedule for passing through centers of destruction and a number of other documents are not always being given to the participants in time. Imprecise planning and the lack of full, timely information generates a mass of questions from participants in the course of competition, leads to unnecessary disputes and squabbling with the judges and excessively drags out the competitions.

The Executive Committee of the SOKK 1 KP SSSR and the journal VOYENNNYYE ZNANIYA receive many complaints on unobjective judging and insufficient qualifications of members of the judging commission. For example, in zonal competitions in the Moldavian SSR a medical team of a sewing factory from the city of Dubossary was deprived of a first place it had won honorably because of careless judging. Unfortunately, such incidents also occurred in the Ukraine and in the Russian Federation (in Krasnodarskiy and Khabarovskiy krays, in Omskaya, Sakhalinskaya and Penzenskaya oblasts and on the Kuybyshev Railroad). These facts indicate that some CD staffs, the medical service and committees of the Societies pay little attention to the selection, training and certification of judges. Judging commissions often take a negligent attitude toward protests of medical team members and do not provide prompt, exhaustive answers, which generates new questions and complaints. Competition organizers have to remember that protests and complaints submitted to the judging commission are examined without delay and the answer is given to team commanders when results are summarized in the critique. Strict and implicit fulfillment of the Statute's requirements will allow avoiding conflict situations and will create the necessary businesslike atmosphere contributing to successful conduct of competitions. Responsibility for their organization is borne not only by committees of the Societies of the Red Cross and Red Crescent and health entities, but also by CD staffs, where a great deal hinges on their active position.

Take just the organization of a rayon. There are still instances today where, despite all prohibitions, competitions are held in stadiums, in parks, in the forests and other places not adapted for this purpose. Conduct of competitions in CD training compounds would largely resolve this problem.

On the eve of the 26th Communist Party Congress, as always before a major historical event, it is customary to summarize results and plan new goals. One of these goals in medical defense work is a further improvement in training of medical formations and, in particular, an increase in the level of organization and conduct of competitions and in their effectiveness. The new Statute on Competitions of Medical Teams and Medical Posts serves as a reference point in this work.

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#### In Chelyabinskaya Oblast

Moscow VOYENNNYYE ZNANIYA in Russian No 1, 1981 signed to press 8 Dec 80 pp 22-23

[Article by N. Nazarenko, chief of CD courses, city of Zlatoust, Chelyabinskaya Oblast: "All Conditions are Present"]

[Text] For a long while our courses were huddled together in a basement room poorly adapted for classes. In winter the instructors and students suffered from the

unbearable stuffiness and in summer from the cold. Visual aids were rather miserable. Just try to do something better when the dampness eats away at everything.

The courses' needs were mentioned more than once, but matters progressed slowly. "No room yet" was the answer we received to all our queries.

Then the newly elected gorispolkom chairman D. Sutubalov looked in on the courses, saw the conditions under which classes were being held and said tersely:

"We'll decide."

The chairman's words soon received concrete confirmation. One of the resolutions made by the gorispolkom stated: "Assign new spaces to the city civil defense courses."

This was the first story in a building with large, light windows. It is true that for the time being an establishment with numerous cubbyholes of offices was housed in it, but we decided not to wait until the space was cleared.

"There's no reason to wait," remarked Col V. Tomskiy, oblast civil defense chief of staff. "We have to act. Plan the layout of classrooms and begin making displays right now. And remember that the layouts have to be capital, meeting the spirit of the times and in strict conformity with program requirements."

We decided to discuss the question of outfitting the courses at the next party meeting of the city CD staff. The discussion was businesslike and beneficial. Many party members later received specific assignments.

We planned to outfit four classrooms in the new courses: general training, special training, party-political work, and methods work. A sketch of each display was discussed in detail at an expanded methods council of the courses and city CD staff.

Now our masters of production training gave all their time free of classes and other scheduled activities to outfitting the courses. The new space allowed the use of large-size displays, and so we made the drawings and texts large so they could be clearly visible from any point in the classroom. Displays on such topics as performance of SNAVR [rescue and emergency reconstruction work], dispersal and evacuation of the populace, collective protection gear, increasing the stability of installation work and a number of other topics were made out of fiberboard.

When it came down to it, our own joiners and artists were found in the collective. The work of master of production training G. Popov especially delighted us. During these days his personal joiner's tools would migrate to the courses.

The work genuinely made everyone enthusiastic. Fierce debates broke out over some of the displays. At such moments we had to turn to literary sources to learn the truth.

A total of 40 displays had to be made, including ten for the general training classroom. It was planned to show means of collective and individual protection and the procedure for dispersal and evacuation of a city population in the display entitled "Fundamentals of Population Protection" (it was 1.9 x 6 m in size). A second display,

somewhat smaller, was devoted to civil defense norms. A separate display depicted the population's actions in response to CD warning signals. Other displays intended for outfitting the general training classroom reflected the following questions: "Civil defense organization and tasks," "Mass destruction weapons," "Protection of children" and "Giving self aid and mutual aid." We decided to demonstrate all the remaining illustrative material needed for classes using an automatic light poster, film projector and the LETI apparatus.

The display "Organization and Conduct of SNAVR" in the special training classroom demonstrated methods of performing rescue and emergency reconstruction work, the procedures for formations to move to a center of destruction, their entry into the center and allocation to work sectors. In addition, it was planned to include illustrative material here devoted to reconnaissance in a center of destruction, elimination of the aftermath of natural disasters and major production accidents, sanitary processing and decontamination, and radiation and chemical reconnaissance instruments. We prepared the display "Increasing Installations' Work Stability" with special care until we were sure that it reflected everything necessary. Next to it we set up the display "Control, Warning and Communications." Subsequently it was planned to use a light poster and the Svityaz' projector for classes in this room. City CD staff officer V. Gafiyatulin refitted the projector so it could be used like the LETI apparatus.

Course workers were given great support by the party organization headed by secretary Lt Col V. Khitrov in organizing the party-political work classroom. We were helped to draw up the topics and the plan for organizing the classroom in conformity with Lenin's definition of the role and purpose of political work. "The voice of the political worker is the voice of the party!" This slogan united four displays which reflected the work of CD formation political instructors. A separate display was devoted to the organization of party-political work in the war years. This classroom also had material telling about the subversive activities of imperialist propaganda.

In the methods classroom we placed documents and illustrative material on conducting exercises, on planning and record keeping of CD training at installations, and on the organization of training for pupils in the second and fifth grades and for the Zarnitsa military sports game in the Young Pioneer camp.

In the corridors we planned to make a display about city civil defense otlichniki, a photo display about exercises and competitions, and slides illustrating separate moments in training under the program for universal compulsory minimum of knowledge. All this material was united by the slogan "By studying and perfecting civil defense you strengthen the Motherland's defenses."

Plans were drawn up and deadlines set, but at first far from everyone believed it was possible to implement them. Nevertheless, the staff and courses had no intention of deviating from plans. The gorispolkom chairman once came by and inspected our work. We already had almost everything ready and it was only a matter of the room.

"We'll have to hurry with the eviction," he said in parting.



And sure enough, the room soon was cleared and we began its reconstruction and repair. The builders' work was going well and it was not standing still for us either. Of course, such an amount of work was hardly within the capabilities of just the courses and the staff, but it is not said in vain: "Good deeds always will find support." The installations came to our assistance with materials, good advice and an interesting idea.

"Our installation has made a functioning model of an instrument for determining the size of protective masks. Perhaps it will be needed in your course as well?" was the suggestion given once by L. Shardin, deputy director of a metallurgical plant.

We did not refuse--who does not need a good training aid? At the plant Leonid Ivanovich showed us one other innovation--an electrified display with sound: "a warning signal." We also had had an idea about electrified displays and the courses' workers already had achieved something. But now we decided to make the general and special training classrooms completely electrified.

That same year Gajdarovich headed the work, and he had a bank of specialists. They included masters of production training of the courses, staff of courses and officials of the city's communications service. The staff of a machine building plant assisted in making three automatic light meters.

In that extraordinary period--city in chaos--at staff Col. A. Shubin and city deputy, Lt. Col. B. Zbyn, began their work day with a visit to the courses where assignment was being made for the courses. Each of them not only monitored the progress of work, but also gave a personal contribution to elaborating the subject matter and arranging displays.

When the builders began the final work phase we were able to begin utilizing classrooms immediately. And as of September of last year the courses already were receiving students in the new spaces. These were instructors of classes under the all-Union program. They were the first to evaluate the advantages of the new classrooms and training equipment. "There is a desire to work at such courses," was the comment we heard here then once on those days.

As a matter of fact, the courses now have all conditions for classes: spacious rooms, modern furniture, interesting visual aids which are convenient to use. We are grateful to everyone who participated in creating this excellent training facility. We will try to ensure that our courses become a true training center for civil defense in the city.

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In Zhukovskaya Oblast

Source: VESTNIK ZABOYA in Russian No. 1, 1981 signed to Bureau 2 Dec 80 by 22-21

(Article by A. Shubin, chief of CD courses, city of Sergichev, Zhukovskaya Oblast: "At the Basis of the Rationalizers")

(Text: The training facility of the Sergichev City CD courses begins holding classes with routine exercises of trainees at a contemporary level.

For example, a classroom with electrified displays and functioning models has been organized with the active participation of our rationalizers N. Danilyuk and A. Zibrov. The students have a special interest in a display model of a national economic installation. Its front side depicts a modern plant with all its municipal and power services. The display is connected with a tape recorder which plays back a verbal commentary, CD warning signals and the sound effects of a nuclear burst.

The model of a plant from a nuclear burst is a component of the display. When the instructor begins telling about the injurious effects of a nuclear burst, a moving part of the display automatically turns 180° and the students see this same installation after receiving medium and minor destruction. The instructor has the capability of demonstrating on the model the sequence of rescue and emergency reconstruction work and the most expedient variants of allocating personnel and equipment in introducing formations into the center of destruction.

A functioning display entitled "Organization and conduct of reconnaissance" is a good training aid. It shows in an established sequence the actions of air and ground reconnaissance. Instructions on conducting reconnaissance and reports on the results of reconnaissance are recorded on magnetic tape and are used as samples in training.

Using this display an instructor can conduct a group exercise graphically and instructively prior to going out on the terrain.

Work has been completed on a new display entitled "Estimation of the radiation situation by the forecast method." It reflects regimes of conduct of various categories of the population under conditions of radioactive contamination. A diagram has been prepared on elimination of the aftermath of natural disasters which shows what steps must be taken in a particular instance at national economic installations and in a housing sector for rescuing people and equipment. A separate display demonstrates techniques for putting out forest fires. This matter is of special importance for us, since a considerable portion of the territory of Zhitomirskaya Oblast is covered by forests.

There are persons engaged in their work among war veterans' officials who make skillful use of visual training aids. N. Danilyuk, an experienced methods specialist and a veteran of the Great Patriotic War who has worked at the courses for over 14 years, conducts interesting classes. He has occasion to meet with various groups of students and he finds an approach to each one. Nikolay Orlov'yevich is able to present material in a clear and interesting manner and to make an apt and appropriate reference to his experience in the "SPVO [local air defense] during the past war.

The CD courses are both a training and a methods center. People come to us with their questions and requests. We refuse no one because it is our duty to give advice or offer method assistance in preparing a particular civil defense activity. In developing and improving our training facility, we consider the fact that the courses must serve as an example for installations in this respect as well.

We are of course gratified by the fact that for three years the Serukhany City Courses have held one of the first places in the Ukraine for the condition of the training facility. This obligates us to continue the work of improving it.

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## DOSAAP AND MILITARY COMMISSARIATS

### DOSAAP: MEETINGS OF REGULAR COMMISSIONS OF DOSAAF

#### Work of Mass Organizations

Moscow SOVETSKIY PATRIOT in Russian 26 Nov 80 p 2

[Article: "The Advanced Collectives' Experience Belongs to Everyone"]

[Text] The Brestskaya Oblast defense organization pays constant attention to the study, generalization and dissemination of the experience of the best, advanced collectives. The society's obkrom is doing purposeful organizational work to introduce all that is new and progressive into practice in primary DOSAAF organization activity in light of the requirements of the June and October (1980) CPSU Central Committee plenums.

Chairman of the Brestskaya Oblast DOSAAF Committee V. Nadezhin told about this in his report at the regular session of the Standing Commission of the USSR DOSAAF Central Committee on Questions of the Work of Mass Organizations. Deputy Chairman of the Belorussian DOSAAF Central Committee P. Maksimov delivered a joint report. The commission's deputy chairman--F. Girchenko, Chairman of the Moskvoretskiy Rayon Committee of the Moscow City DOSAAF--led the session.

Members of the standing commission--Chairman of the Altayskiy Kray DOSAAF Committee V. Katayev, Chairman of the Tumbovskaya Oblast Committee of the society A. Lushchynikov, Chairman of the Rovenakaya Oblast Committee Yu. Korkhov and Chairman of the Arkhangel'skaya Oblast Committee V. Butvin--reported on the execution of matters they had been charged with. They assessed positively the organizational work of the Brestskaya Oblast DOSAAF Committee and told about the advanced experience of their organizations. It was noted that the Brestskaya Oblast committee pays tireless attention to propaganda on leading experience and to introducing it into the work of primary organizations and, on that basis, a further organizational and logistic strengthening of defense collectives and an intensification of the military and patriotic education of workers are achieved. These questions are raised systematically at sessions of the bureau and the presidium of the oblast committee.

Each year the presidium of the Moscow, Lenin, Brest, Irkutskiy Rayon, Saranovichi and Pinsk DOSAAF city committees hear some 10 percent of the primary collectives' chairmen on questions of improving popular defense work, developing socialist competition and strengthening publicity therein.

Procedures experts of the DSSAAF headquarters take an active part in generalizing and disseminating the experience of the best. This year alone 10 placards and leaflets, an annotated catalog of reportorial and documentary military-patriotic films, and various brochures that familiarize the society's activists with the achievements of those who are advanced have been issued. Specialized columns are being published in oblast and rayon newspapers that publicize the work of the best DSSAAF collectives. Opportunities for this purpose on radio and television also are used. Outside agencies and lecture groups are extending great help in this area.

At the same time, not by far has all the potential for generalizing and disseminating advanced experience been used. It is being introduced especially poorly into lagging organizations and rural organizations. Thus, for example, the Stalin-aki, Malarski, and Zubrinski rayon organizations have been lagging for a long time.

The 1968 DSSAAF Central Committee's Standing Commission on Questions of Work in Mass Organizations recommended that the society's Krutskaya Oblast committee continue to improve the forms and methods of work on the further study, generalization and dissemination of all that is new and advanced and to introduce advanced experience more actively into primary DSSAAF organizations.

The society's oblast and rayon committees should use widely the positive experience of the Krutskaya Oblast committee on introducing everything that is new. They should increase the responsibility of supervisory personnel and the activist element in organizing popular defense work directly at enterprises, construction projects, kolkhoses, sovkhozes, educational institutions, schools and other institutions.

Report Chairman of the 1968 DSSAAF Central Committee Lt Gen V. Mosyayev summed up the results of the Commission.

The operating plan of the Standing Commission on Questions of the Work of Mass Organizations for 1967-68 was approved at the session.

### YEARS Training for Armed Forces

MASS ACTIVELY SAYING IN RUSSIAN 18 NOV 89 p 2

ARTICLE: "Practical Training is the Main Thing"

Yakov DSSAAF training organizations face major responsibility laid in the matter of raising the quality of training of cadets. In this was discussed at the session of the 1968 DSSAAF Central Committee's Standing Commission on Training Youth for Service in the USSR Armed Forces.

Its chairman, Lt Colonel, gave the floor to Chairman of the Chabarovsk DSSAAF Committee Lt Colonel. In his report, "On Improvement of the Planning and Organization of Practical Training in DSSAAF Schools," he stressed on the most essential question, upon the solution of which the quality of cadet training depends:



The Kray committee pays strong attention to planning the training and education process, to monitoring the fulfillment of programs for training specialists, to raising the effectiveness and quality of practical and laboratory-practice exercises, and to establishing and improving the training-materials base. The committee monitors the work of instructors and specialists in motor-vehicle technical servicing and driving and the operation of radio equipment and the elimination of typical malfunctions.

Organized socialist competition among the staff and changing personnel of the Kray's schools, as well as the regular conduct of various competitions--for the best driver, motorcyclist, electrician, diver, and radio-telegraph operator--have helped to raise the practical training of trainees successfully. All this is affecting positively the quality of inductee training: the number of those who pass the examination has increased substantially in recent years.

After delivering a joint report, the Chairman of the Primorsky Kray DSSAAF Committee, A. Karelin dwelt on problems of training specialists for electronic and nautical schools. He noted that certain changes introduced in the program to train RLA [radar] operators enabled them to make substantial advances in acquiring practical skills. Positive testimonials from military subunits testify to this.

Chief of the Brestskaya Consolidated Technical School A. Kozik told about experience in training motor-vehicle drivers. Practical laboratory exercises in the construction and technical servicing of motor vehicles by the frontal-brigade method or the combined-brigade method are being conducted here. Each study group is divided into eight brigades of three or four people each. The school has reached the point at which, during the study of small components and assemblies, each trainee engages independently in disassembling and assembling them. Elements of "critical situations" are introduced during driver training at the driver-training area.

The standing commission worked out recommendations for improving the planning and organization of practical study in Khabarovskiy Kray DSSAAF schools.

It recommended that union-republic, Kray and oblast DSSAAF central committees and DSSAF DSSAAF continue the work to improve the planning of training and the educational process and the practical training of the trainees; that they raise qualitatively the period of teaching-outside training for supervisors, instructors and specialists of training organizations; that work continue on the creation of equipment for classes and for practical laboratory exercises that will enable complete execution of the established programs; and that driving fields, target areas and crane fields be maintained in constant readiness for use.

The Teaching Methods Office of the USSR DSSAAF Central Committee is charged with developing procedures for organizing and conducting practical laboratory exercises in the technical servicing of all types of equipment, including the introduction of malfunctions, and with developing or tests for evaluating the malfunctions presented to trainees for their detection and elimination.

Deputy Chairman of the USSR DSSAAF Central Committee Lt Gen A. Shvach took part in the work of the standing Commission of the USSR DSSAAF Central Committee on the Training of Youth for Service in the Soviet Armed Forces.

## Military-Patriotic Propaganda

Moscow SOVETSKAYA PATRIOT In Russian 26 Nov 80 p 2

[Article: "Propaganda Needs Sweep and Effectiveness"]

[Text] The USSR DOSAAF Central Committee's Standing Commission on Questions of Military-Patriotic Propaganda heard and discussed the report of Chairman of the Ferganskaya Oblast DOSAAF Committee M. Rogozhin about the experience of the defense society's oblast organization for military-patriotic education of youth in light of the requirements of the CPSU Central Committee decree, "On Further Improvement of Ideological and Political Education Work." Chairman of the Kuybyshevskaya Oblast DOSAAF Committee V. Glebskiy presented a joint report.

It was noted at the commission's session that in carrying out the requirements of the 25th party congress, CPSU Central Committee decrees on ideological questions, and decisions of the 8th All-Union DOSAAF Congress, the Ferganskaya Oblast organization of the defense society, under the guidance of party and soviet organs, did definite work in the military-patriotic education of workers, especially of youth.

DOSAAF collectives introduced an integrated approach to military-patriotic education. In most organizations this work is being built up on the basis of unified plans--with trade unions, the Komsomol and the Znaniye society--which are being developed and carried out under the guidance of party organs. In so doing the characteristics of the various groups of working and studying youths are being considered.

At the same time the commission noted that there are deficiencies in the work of the military-patriotic education of youth in oblast DOSAAF organizations. Certain rayon committees did not achieve a full restructuring of military-patriotic work in accordance with the requirements of the CPSU Central Committee decree on ideological questions.

The commission recommended that the Ferganskaya Oblast DOSAAF Committee, using the experience gained, continue to work persistently to implement the CPSU Central Committee decree of 16 April 1979, to improve the military-patriotic education of workers and youth, to raise the quality and effectiveness of the measures being conducted, and to mobilize members of the defense society for a worthy greeting to the 26th CPSU Congress.

The commission called the attention of the oblast DOSAAF committee to the necessity to further raise the role of primary organizations in military-patriotic work and recommended that they strive to act creatively, encompass the broad mass of defense society members with their ideological influence, and be transformed into genuine centers of popular defense work.

The quality of political-education work in training organizations should be raised, since it is one of the most important factors in providing high effectiveness for training youth and white-collar workers for the Armed Forces. Steps must be taken to improve the training and education process.

At the commission meeting chairmen of the Chitinskaya Oblast DOSAAF Committee A. Chernyshev, the Yakutskaya Oblast DOSAAF Committee V. Arkhipov, and the North Ossetian Oblast DOSAAF Committee P. Tsallagov shared work experience in the military-patriotic education of workers and youth.

The commission approved the operating plan for 1981. Members of the standing commission were assigned tasks.

Deputy Chief of the Administration for Mass Organizational work and Military-Patriotic Propaganda of the USSR DOSAAF Central Committee L. Yasnopol'skiy spoke at the end of the session.

#### Material Base Development

Moscow SOVETSKIY PATRIOT in Russian 26 Nov 80 p 2

[Article: "Build Better"]

[Text] Chairman of the Chuvashskaya Oblast DOSAAF I. Matyukhin and his deputy, A. Likhutin, went to Saratov, Engel's and Balakovo in September. The Standing Commission on Development of the Supply and Equipment Base in DOSAAF Organizations charged them with checking the work of the Saratovskaya Oblast DOSAAF Committee on Development of the Sports Base in the defense society's oblast organization. After acquainting themselves with the state of affairs, the visitors also noted deficiencies. For example, in the oblast there is one small-caliber rifle per 18 participants, and 17 boys and girls are being trained per motorcycle.

It was also noted that more attention must be paid to the countryside—to constructing semienclosed firing ranges there, for one thing.

I. Matyukhin reported all this to the commission session.

Chairman of the Saratovskaya Oblast DOSAAF Committee on Development of the Sports Base in Oblast DOSAAF Organizations K. Fedorov presented a report to the session. The committee has organized sections for military-technical types of sports. Federations have been created for automotive-vehicle and motorcycle sports, applied multiple-event military sports, helicopter and aviation-model sports, multiple-event nautical sports, scuba diving, underwater shooting, ship modeling, firing sport, radio sports and service-dog breeding.

Sports and training organizations have been allocated about 400 motor vehicles, more than 300 motorcycles, more than 4,000 small-caliber rifles and more than 500 transmitters and receivers. Forty-two obstacle courses for applied military sports have been built.

During the last 5 years the buildings and garages of 8 technical sports clubs have been erected or overhauled, and premises have been built for cross-country runners at the Saratov Consolidated Technical School and at the Saratov, Engel's and Balakovo motor-vehicle schools. A place for operating tethered model airplanes has been turned over for operation in Saratov. Construction of an asphalt go-cart track has been started.

The commission chairman, Chairman of the Gor'kovskaya Oblast DOSAAF Committee V. Suslov, noted in his address that the Saratovskaya Oblast Committee is building many things and comparatively rapidly.

Deputy Chief of the Administration for Capital Construction and Supplying of Materials and Equipment A. Sokolovskiy spoke about these also.

Deputy Chairman of the USSR DOSAAF Central Committee Maj Gen Ingr V. Zemlyannikov spoke at the session.

It was recommended that the Saratovskaya Oblast DOSAAF Committee persistently strengthen and improve the sports and supply-and-equipment base of primary and sporting organizations, pay greater attention to effectiveness in the use of training buildings and sports structures, reduce the duration and raise the quality of construction, and do more building by the in-house method.

#### Workshop Production Activity

MOSCOW SPORETRIZ PAPER (in Russian) 26 Nov 80 p 2

[Article: "Raise Output Quality"]

[Text] The output of the defense society's production enterprises, which are carrying out important and responsible tasks for strengthening the supply and equipment base of DOSAAF organizations, constitutes tens of millions of rubles' worth of a broad variety of articles. The main trend in their activity today is implementation of the instructions of the 4th USSR DOSAAF Central Committee Plenum (1979) about improving production, raising all technical and economic indicators, and--for this purpose--concentrating and consolidating enterprises and specializing them in the output of what the society needs.

How are these matters getting along? This was discussed at the session of the Standing Commission on Questions of the Production Activity of Enterprises of the Society, after reports by chairmen of the Voronezhskaya Oblast DOSAAF Committee A. Grigor'yev and the Smolenskaya Oblast DOSAAF Committee I. Kondratov and joint reports of Chairman of the Kurskaya Oblast DOSAAF Committee N. Denisov, the chairman of this commission, and Chairman of the Kharkovskaya Oblast DOSAAF Committee M. Sanyakov had been heard.

The Voronezhskaya Oblast DOSAAF Committee undertook a policy of consolidating and concentrating production and of producing the products that the society needs. While four workshops operated here prior to this year, now they have been amalgamated into one, which is under the oblast STA (Technical Sports Commission). This enables production organization and technology and working conditions to be improved. The concentration of the output mainly of items that the defense society needs was justified. And here are the first results. During the first 9 months, for example, an income of 185,307 rubles was obtained and labor productivity increased.

At the same time, participants at the session noted, the DOSAAF Committee did not by any means solve all problems with the amalgamation of the workshops into one. The proper structure for organizing production was not pointed out, the wage fund was unbalanced by 12 percent, and living conditions and the living of the



workshop did not meet modern requirements. The oblast's DOSAAF committee, in consolidating production, still was not able to bring its intended production up to its goal.

The situation is different in Rostovskaya Oblast. Chairman of the Rostovskaya Oblast DOSAAF Committee I. Kondratyev told about this. Two combines formed the base for the forming of one combine--the Production Combine of the Rostovskaya Oblast DOSAAF Committee. Its basic production today is intended for popular-defense, training and sports work--classes of programmed DON-2 training, visual training aids, placards and other items. Thanks to concentration and specialization and improvement in technology, technical and economic indicators have been raised. The planned volume for the first 9 months of the year was carried out 103.3 percent.

There are many innovations in the collective. Socialist competition has been promoted under the slogan, "Work without lagging in accordance with the 12 technical and economic indicators."

Of course there are deficiencies here also, particularly in the siting of departments and sections and in the work to insure quality of certain items. But they are being overcome by persistence, thanks to daily purposeful supervision.

Many speakers told about the need to raise in every possible way the quality of the items produced. It was emphasized that this is one of the fundamental tasks of the society's production enterprises. Examples of poor quality of items, including furniture produced by DOSAAF's Kropotkin plant and sports boats by Leningrad's Patriot production association of DOSAAF, were cited.

Speaking in the debates were chairmen of oblast and kray DOSAAF committees V. Ivan'kov (Chechen-Ingush ASSR) and V. Golodnikov (Stavropol'skiy kray), chief of the Administration of Production Enterprises of the USSR DOSAAF Central Committee A. Ilyushchenko, and others.

Deputy Chairman of the USSR DOSAAF Central Committee Yu. (nee) Ingt V. Zemlyannikov participated in the commission's work.

The recommendations of the Voronezh and Rostovskaya oblast committees of the DOSAAF to further improve the work of their production enterprises were adopted.

### Technical, Applied Military Sports

Moscow. DAILY PATRIOT (in Russian) 16 May 80, p. 2

[ATTESTED] Improving Sports Work

[Text] Chairman of the Rostovskaya Oblast DOSAAF Committee Ye. Kondratyev conducted the session of the commission on questions of developing technical and applied military types of sports.

Chief of the Administration for Military and Technical Types of Sports of the USSR DOSAAF Central Committee S. Molodtsov acquainted members of the commission with the prospects for developing technical and applied military types of sports. In light of the requirements of the VII Central Committee and the USSR Council of Ministers and the USSR DOSAAF Central Committee Presidium decree of 14 March 1978, "On the

Composition of and Measures for Improving the Work on Further Development of Technical and Applied Military Types of Sport."

Taking part in the discussion of these questions were N. Olin (Chairman of the Zakarpatskaya Oblast DSSAAF Committee), I. Tyshchenko (Chairman of the Krymskaya Oblast DSSAAF Committee), Ye. Zhukov (Chairman of the Penzenskaya Oblast DSSAAF Committee) and others.

Comrade Zhukov expressed ideas about developing rifle shooting and applied multiple-event military competitions, since these types of sport are the most practicable, do not require large financial expenditures, and enjoy great popularity among preinduction youth.

N. Olin touched in his speech upon the problems of local construction of technical sports complexes.

As a result, the basic tasks for developing technical and applied military types of sport, for intensifying political-education work with trainers and sportsmen, for strengthening the supply and equipment base, and for increasing mass participation and raising the skills of sportsmen were planned.

The work plan for 1981 was also confirmed at the commission's session. Basic attention will be paid to further developing technical and applied military types of sports. With this aim, the commission plans to listen during its sessions to questions about the work of primary DSSAAF organizations of Krasnoyarskiy kraj to fulfill the DSSAAF Central Committee Presidium decree of 14 March 1978, about the work of the Krasnoyarskiy kraj DSSAAF organization to develop technical and applied military types of sport among adolescents at the place of residence, and about training club sports cadres in Belorussian and DSSAAF organizations.

Active quality in the discussion of these questions will help the work of the Integrated Commission of the DSSAAF Central Committee, which will help to generalize positive experience, discover deficiencies, and prepare recommendations for republican, kraj and oblast DSSAAF committees for developing technical and applied military types of sports.

#### Military-Technical Knowledge Propaganda

Resolving MILITARY PATRIOT in Belarusian 26 May 80 p. 1

(Artykul 1 - 1980 g. 1000)

[Yak] The Belarusian Republican DSSAAF organization last year trained about 10,000 specialists in the most common technical trades, carrying out the plan 105.4 percent (the five-year plan goal also was not successfully). Oblast DSSAAF Committee Chairman V. Zhukov, who delivered a report at the session of the Standing Commission on questions of propaganda of military-technical knowledge and the training of personnel in the most common technical vocations, told about this.

Positive results could be achieved, as noted by V. Zhukov (Chairman of the DSSAAF Central Committee), I. Tyshchenko (Chairman of the Krymskaya Oblast DSSAAF Committee), V. Zhukov (Chairman of the Penzenskaya Oblast DSSAAF Committee), and I. Tyshchenko (Report Chief of the

Administration for Training Personnel in Cost Accounting for the National Economy, and others who took part in discussing the report, primarily because the oblast's DOSAAF committee did much to improve the training materials base. More than 40 training classes in training organizations and sports and technical-sports clubs have been equipped by the efforts of instructors and specialists. During the last 2 years alone 16 trucks, 16 cars, 38 motorcycles, 5 automotive trailers and much other training equipment and aids have been obtained.

All this, it goes without saying, has helped to improve the training and educational process and to raise the quality of training.

At the same time, the commission noted that not by far are all reserves being used in the work to train personnel for the national economy. The level of training specialists for the economy lags behind today's needs. The passing of GAI (State Motor-Vehicle Inspection) examinations has been 65-70 for the oblast from the start.

In many DOSAAF organizations effectiveness in the use of training trucks and cars is low. In 1979, 1 person was trained per truck (the norm is 30), and 22 per car (the norm is 74).

The oblast's DOSAAF committee does not use adequately the existing potential for training specialists at technical sports clubs.

Not even where does the training materials base meet the training program's requirements.

The standing commission recommended that the oblast DOSAAF committee develop and take additional measures to further expand the training of personnel for the national economy under direct agreements with industrial enterprises, sovkhozes and kolkhoses.

It was recommended that the oblast committee continue the work to improve the training materials base, pay special attention to increasing the wiring of rayon and city technical sports clubs and to supplying them with the necessary equipment and visual training aids and equipment, and take practical measures to equip grounds for training motor-vehicle and motorcycle drivers.

It was recommended that a school for advanced experience in training specialists for the national economy be created by November 1981 on the basis of the best training organizations and technical sports clubs and that its work be aimed at raising the skill levels of instructors and specialists in production training.

The standing commission, at the suggestion of its chairman, V. Tarasov, reviewed and approved the operating plan for 1981.

## Student Youth, Adolescents

SOVIET MILITARY PATRIOT in Russian 26 Nov 80 p 2

[Article: "The Motherland Needs Excellent Soldiers"]

[Text] questions on work with student youth and adolescents that the standing commission discussed always stimulate great interest on the part of workers in public education, vocational and technical education, and higher schools. Representatives of the ministries of education and higher and intermediate special education of the USSR and RSFSR and of the State Committee on Vocational Education took part, at this time, along with members of the commission, in discussing problems connected with the participation by primary DOSAAF organizations of schools, PTU's [vocational and technical schools], tekhnikums and vuzes in training youth for service in the ranks of the Soviet Armed Forces.

Chairman of the Chelyabinskaya oblast DOSAAF Committee P. Kovalenko delivered a report. He said that questions of training youth for doing its sacred duty to defend the achievements of October are always being scrutinized by DOSAAF oblast committees and the activist element of DOSAAF. They are discussed regularly at sessions of the presidium and at plenums of DOSAAF oblast committees.

An integrated plan for work on the military-patriotic education of workers and for training youth for service in the army, which has been coordinated with the Komsomol's oblast committee, the oblast public-education section, and the Znaniye soiuznitsa's board and approved by the CPSU obkom, has been worked out jointly with the oblast's military commissariat.

The reporter also dwelt on concrete forms of military-patriotic and popular defense work that have been widely propagated in Chelyabinskaya Oblast. The supervisor of the oblast organization did not conceal the fact that there were deficiencies in the matter of training youth for military service, and he told what measures are being proposed for adoption in order to eliminate them.

Comrade Kovalenko's report stimulated broad discussion. After that, Chairman of the Novosibirskaya oblast DOSAAF Committee Ponomarev spoke. He had visited Chelyabinsk beforehand and had become acquainted with the role that oblast DOSAAF organizations played in such an important matter as basic military training and the military-patriotic education of future soldiers.

Chairmen of the Irkutskaya and Tomskaya oblast DOSAAF committees G. Iamil'chenko and V. Bogdanov, and the head of the DOSAAF Committee of the 63th Krasnodar'ye Infantry Division shared experience in this area at the committee session.

Chairman of the All-Union Committee for Work of Mass Organizations and Military-Patriotic Propaganda of the USSR DOSAAF Central Committee A. Mamayev summed up the results of the discussion. Noting that intermediate schools, PTU's and other training establishments are doing much military-patriotic work, with the participation of DOSAAF organizations, Mamayev said that not always, unfortunately, as it being related to the training of youth in military matters.



The commission recommended that Chelyabinskaya Oblast DOSAAF organizations take measures for further improving their work in the military-patriotic education of student youth and in training them for service in the Soviet Armed Forces. The network of technical groups and sports sections must be enlarged.

During the All-Union inspection contest for primary Komsomol and DOSAAF organizations and the examination of inductee and preinduction youth on military-technical training, attention must be paid to further improving the work of youth military-patriotic formations, to inducing student youth to pass the norms for the GT [Ready for Labor and Defense] complex and the standards for the "Young Marksman" and "Marksman" badges. It was recommended that the DOSAAF oblast committee develop concrete measures for strengthening the supply and equipment base of primary organizations of DOSAAF training institutions.

The members of the standing commission discussed and adopted the plan for 1981.

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CSO: 1801

## MILITARY SCHOOLS AND ACADEMIES

### ENTRANCE REQUIREMENTS DESCRIBED

Moscow KRASNAYA ZVEZDA in Russian 17 Jan 81 p 4

[Article: "Admission Requirements"]

[Text] Military schools, institutes and the military bandmaster faculty accept for enrollment young civilian males, military enlisted personnel and noncommissioned officers of all arms of service, regardless of military occupational specialty and length of service, who have a completed secondary education, who are in a fit state of health for study at military educational institutions, and who have successfully passed competitive entrance examinations. Applicants must be between 17 and 21 years of age. Extended-service personnel are accepted for enrollment upon completion of two years of extended service, up to the age of 23 years.

Warrant officers are entitled to enroll for study at military higher educational institutions after two years of service in a warrant officer position or in an officer position.

Conscript and extended-service personnel desiring to enroll for study shall submit an application to their unit commander by 25 February, while civilians shall submit an application to the rayon military commissariat in the locality where they reside, up to 30 April of the year of enrollment.

An application submitted by military personnel shall state the following: military rank, last name, first name and patronymic, current position, date of birth, general and military education, and name of the military educational institution in which the applicant wishes to enroll. The following shall be submitted with the application: secondary education document (copy of certificate of completion, diploma), party or Komsomol character reference, three witness-certified photographs (bareheaded, 4.5 x 6 cm), curriculum vitae, record of service, and copy of birth certificate.

Civilian applicants shall state the following in their application: last name, first name and patronymic, year and month of birth, address of residence, and name of the military educational institution at which they wish to enroll. The following shall be appended to the application: curriculum vitae, character reference from place of employment or school, party or Komsomol character reference, copy of secondary education document (persons enrolled at secondary schools shall submit document indicating their current academic status), copy of birth certificate, three witness-certified photographs (bareheaded, 4.5 x 6 cm).

The applicant shall submit his passport, record of military service or draft registration slip, original secondary education documents and birth certificate to the admissions committee upon arrival at the school.

Komsomol members recommended for study by rayon (city) Komsomol committees shall attach to their application their national Komsomol travel authorization.

At the majority of military schools entrance examinations shall be given in mathematics (written and oral), physics (oral), Russian language and literature (composition). Warrant officers are examined on weapons familiarity, mathematics, physics and general military regulations (oral).

Applicants, upon arrival at military educational institutions, are given a medical examination, while applicants for flight schools and naval schools are also screened for occupational and psychological aptitude.

In addition, in order to determine physical fitness, military applicants are given a practical test on the items of the Military Sports Complex of the USSR Armed Forces, while civilian applicants are tested on the items of the All-Union "Prepared for Labor and Defense of the USSR" Physical Training Complex.

Persons who have received USSR decorations and medals for personal feats or for excellent results in combat and political training, conscript and extended-service personnel who have been excellent rated in combat and political training for not less than one year, with announcement of this fact in an official unit order, shall be accepted for enrollment exempt from competition with other applicants, upon receiving favorable marks in the entrance examinations.

Persons who have graduated from secondary school with a medal or have graduated with distinction from a secondary specialized school shall be accepted for enrollment at military secondary schools without entrance examinations; upon entering military higher educational institutions they shall take an examination only in one of the subjects, announced to applicants together with the decision of acceptance to the examinations. Upon receiving an examination mark of excellent, these persons are exempted from taking further examinations, while upon receiving a mark of good or satisfactory they must take examinations on the other subjects covered in the entrance examinations.

Graduates of a general curriculum secondary school who have been awarded a certificate of merit "For Particular Success in Studying Specific Subjects," when applying for enrollment to military secondary schools are exempted from taking an entrance examination on the subject for the successful mastery of which they were awarded a certificate, if this subject is covered in the entrance examinations.

Entrance examinations for military educational institutions are held from 15 July through 5 August (from 20 July through 20 August for warrant officers), and are given by field admissions committees for military personnel from 5 June through 5 July.

Military commissariats and unit commanders shall send applicants to entrance examinations at the request of the school commanding officers. Applicants receive free travel and, upon arrival at the school, free meals and lodging.

All graduates of military schools, institutes and faculty are given the military rank of lieutenant, engineer-lieutenant or lieutenant technical service, receive a military higher or secondary specialized education diploma of all-union pattern, and a badge indicating successful completion of a military educational institution.

Detailed information on enrollment procedures may be obtained at military commissariats or military unit headquarters.

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